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HOSPITAL WASTE MANAGEMENT: A CASE STUDY OF 2 TERTIARY HOSPITALS IN ERMITA, MANILA

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Approval sheet

In partial fulfillment of the degree of Bachelor of Arts in Development Studies, this undergraduate thesis entitled Hospital Waste Management: A Case Study of 2 Tertiary Hospitals In Ermita, Manila, presented and submitted by Marie Cris P. Chieng is hereby accepted.

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Abstract

This study entitled Hospital Waste Management: A Case Study of 2 Tertiary Hospitals in Ermita, Manila focused on the actual practices of waste management of PGH and Manila Doctors Hospital in accordance with the rules set by the MMDA through MMDA Ordinance No. 16 and by the Department of Health through its Manual On Hospital Waste Management. The study compares the practices of waste management between a public and a private hospital and identifies the stages in the waste handling process where violations of the provisions of the two guidelines occur. Further, the study also looked in the weaknesses found in the two guidelines and provided recommendations on both the waste management of the two hospitals as well as on the laws pertaining to the regulation of this practice.

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CHAPTER I

Introduction

Loud cries due to environmental degradation had already been in the forefront even way back in the 70's. Up until now, so many environmentalists are clamoring for environmental preservation, protection and conservation. Almost all animals have their own advocacy groups. Many popular individuals take the cause of poor animals such as the dolphin, the whales and even the cats and the dogs. Their cry of outrage for the slaughter and inhumane treatment for these animals always make it in the headlines. There are also many advocacy groups rallying for the preservation of the bay, the forest and the mountains but we have not seen a very prominent and high profile group rallying for the cause of the urban environment. Yes, there are complaints on too much air pollution, dying of the rivers and presence of stinking esteros, squatters and urban spatial problems and wastes pollution and it seems that all we are ever going to hear are complaints.

Of all these, the problem on wastes pollution had been the most ignored. There had been no big concert of different groups to seriously launch a campaign on preventing this accumulation of millions of tons of wastes. Maybe this is one problem we could not point to anybody else. Perhaps this is one problem we realize that we are all to blame which is

why we keep silent about all these and just tend to grin and bear it.

It seems that even if everybody could perceive the seriousness of the situation, nobody prods urgently to give it the boost and attention it needs. The problem on wastes just comes on outbursts and seasonal news. If there is something controversial about the issue, then it is the only time the issue will hug the news and all we could read and hear are the bickering and the pinpointing of mistakes. Moreover, the culprits of the waste problem are always the big industrial giants and the squatters who indiscriminately throw their garbage anywhere. Who had stopped and thought that hospitals do produce wastes and harmful ones at that? Who pinpointed the kind of threat it poses to the environment? It seems that hospitals are simply viewed as a place where one could get well. It never gets the notion that it is also a place of breeding diseases if one is careless. But we must be forced to admit that the other side of the coin in the treatment of patients and provision of medical services is the accumulation and generation of not only general wastes but also harmful and infectious ones. Not until the scavengers and the garbage collectors complained of being accidentally pricked by syringes and the notoriety of the communicable AIDS disease did people suddenly become aware of the threat posed by hospital wastes.

Along with this idea, there is therefore a growing concern that hospital waste management is given more notice because the problem of hospital waste mismanagement posits a greater risk on the populace. The people must always remember that "Environmental management is the first line of defense against disease" (Morgan, 1993: 17). This is never an overstatement.

Research Problem

The research will try to answer the following questions:

1. What is hospital waste management?
2. What are the existing government policies regarding hospital waste management?
3. What are the methods of hospital waste segregation, treatment and disposal and how do hospitals practice such?
4. How big is the gap between government policies and the actual practices of hospital waste management? What are the reasons for this gap?
5. What are the problems encountered by the hospitals in their waste management practices? What are the factors that account for such problems?

6. In what way do these problems affect the effectivity of the hospital's waste management practices?

Definition of Concepts

The research will basically focus on hospital waste management which is defined as the planned system of effectively controlling the production, storage, collection, transportation, processing and disposal or utilization of hospital waste in a sanitary, aesthetically acceptable and economical manner. Hospital wastes would mean wastes specifically produced by the hospitals. These hospital wastes include cotton swabs, syringe, gloves, operating sponge, pathological wastes and blood and body fluids. Hazardous hospital wastes pertain to hospital waste that needs special handling to avoid injury or illness to people or damage to property and environment. Hazardous hospital waste is composed of infectious and pathological waste. Examples of hazardous hospital wastes are those wastes that had been in contact with an infectious patient or the discarded things that had been used and administered to a patient with a communicable disease.

The actual practices of the hospitals refer to the day to day waste management practices of the hospital's waste management personnel such as garbage segregation, collection, and disposal. Prescribed rules for hospital waste management practices refers to MMDA Ordinance No. 16

and those provided on the Manual on Hospital Waste Management.

A private hospital is a hospital owned by a corporation or by private individuals. A private hospital usually operates on the basis of profits. A public hospital is a hospital operated by the government and is run using public funds. A public hospital runs on the basis of providing cheap quality health care to the people.

The health institution includes all levels of hospitals, specialty hospitals, maternity and lying-in clinics and all other entities that exist to provide health service.

The population is defined as everybody who is seeking for health care and services, the people and personnel involved in health institutions and the people affected by the environment.

The environment is defined as the external factors that affects the population, which include air, water and land quality and occupational hazards.

The government is the authority that regulates and administers laws and policies for the benefit of other units.

Theoretical Framework

This research will make use of the general systems theory. This theory defines system as a set of units with a relationship between them. The state of each unit is constrained by, conditioned by and is dependent on the state of other units (McKenzie, 1960: 30).

The relationship of the units provide an avenue for the exchange of influences between the units in terms of demands and supports and the responses of the units to the demands and supports made to them by the other units.

However, each unit is already a system in its own right. It also contains different units with its own system of linkages. But, taken in the systems view, the unit is termed as a subsystem.

For the purposes of this research, the study would only be looking at a system composed of the health institution, the population, the environment and the government units and the interrelation of these four with each other.

The health institution exists because there is a need for the population to seek for health care and services. However, the existence of the health institution is in accordance with the laws and policies set by the government. If the health institution does not comply by government rules and regulations, the health institution goes out of the system. On the other hand, the health institution

affects the environment through the wastes it generates in the consequence of providing health services. At the same time, the environment affects the health institution because the environment plays a big role in determining the general health condition of the population that is the institution's client.

The population gives support to the health institution through its continued patronage and seeking of health services. The health institution answers the need of the population through the provision of services aimed at alleviating the health condition of the population. The population shows its support for the government through payment of taxes and obeisance to the laws and rules set by the government. The government affects the people through provision of public services and through enactment of needed laws and policies. The environment affects the population through the people's biological and aesthetic needs. The population needs clean air, water and land in which to live. However, the environment is also vulnerable to the population since it is the people's acts that make and affect the present environment.

The government interacts with the population through its acceptance of taxes, making it possible for the government to function and exist. In return, it provides services to the people and implement laws and policies for proper governance and to make sure that the population exists in the society in a relatively orderly and safe

manner. The government affects the health institution through the provision of regulations for its existence, through providing guidelines for the proper management of health institution and provision of services such as waste collection. The health institution shows its support for the government by means of giving taxes and following the rules. The government affects the environment through the rules it makes. The environmental impact of those rules could be destructive or constructive. The environment makes its demands on the government when the environment poses to be a threat or a problem to the population.

The environment interacts with the population through its provision of our most basic biological needs such as our need for clean air and water. It makes its demand on the population when the population perceives the environment to bring harm to them or there is an eminent threat of possible depletion of resources. Support of the population could come in the form of environmental awareness, preservation and promotion. The health institution adjusts its waste management practices to minimize the hazard that it could pose to the environment. The environment makes demands from the government when it could no longer tolerate the amount of abuse it has received from the population. One form of abuse is indiscriminate waste disposal.

For a better understanding of the framework please refer to Figure 1.

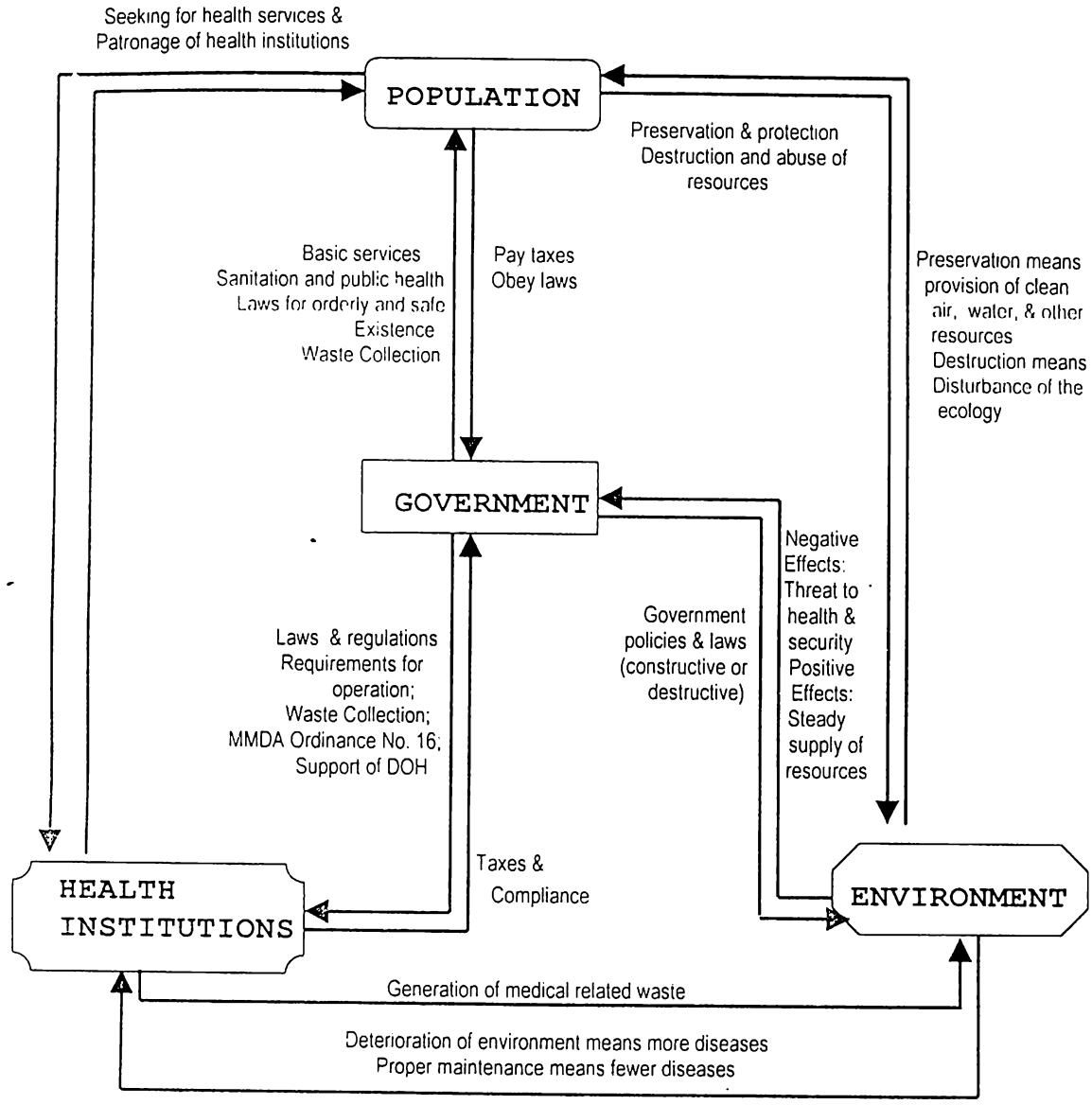

Figure 1. A diagram representing the interrelationship among the different units of the system.

Objectives of the Study

The main focus of the research is to document the waste management policies and practices of hospitals found in Ermita, Manila. Specifically, the research aims:

1. To present each hospital's policies on waste management and illustrate the flow and actual practice of hospital waste management from segregation, collection, transport and disposal.
2. To present the prescribed government rules, guidelines and policies on hospital waste management.
3. To present the actual practices of hospital waste management vis-à-vis the prescribed government policies.
4. To determine the factors that affects the implementation of the prescribed hospital waste management policies.
5. To evaluate the hospital's practices in terms of appropriateness, adequacy and effectivity.
6. To be able to give substantive views, explanations and ideas that will help in the creation of more suitable policies and projects regarding hospital waste management as based from the outcome of the research.

Hypotheses

1. The need for sufficient fund plays a big factor in the full implementation of the hospital waste management policy.

2. Actual hospital waste management has deviations from prescribed government policies.
3. Private hospitals have more funds to use and allocate for hospital waste management as compared with public hospitals.

Methodology

This research uses the exploratory design using a case study. The samples were chosen through purposive sampling. The study calls for the researcher to observe the two hospitals' daily waste management activities for a week and to interview the chiefs/heads of the different departments along with the personnel involved in waste management and disposal. Each hospital's practice was duly charted and documented, after which, their practices were compared with each other and with the existing government policies, requirements, and regulations.

Library work was the first step taken in the process of data gathering. An exhaustive research regarding various methods of hospital waste management and disposal was conducted in order to formulate the theoretical framework. Different government policies and laws had to be acquired for the data presentation.

Formal communication was sent to each hospital to get their consent in the conduct of the research.

Data gathered were analyzed through the use of the Triangulation method. Other data were presented in the form of charts and tables for easy tabulation and inference making.

Review of Related Literature

According to the Manual on Hospital Waste Management (Environmental Health Service, DOH), there are eight main categories in which to classify health care waste. These are:

a) General wastes - which include domestic-type waste, packing materials, non-infectious animal bedding, wastewater from laundries and other waste that do not pose a special handling problem or hazard to health and environment.

b) Pathological wastes - consisted of tissues, body parts from surgical operations, biopsy and autopsy, human fetuses and animal carcass and most blood and body fluids.

c) Radioactive wastes -wastes generated from nuclear medicine section, diagnostic and therapeutic procedures and paraphernalia used. Wastes could either be solid, liquid or gas contaminated with radionuclides.

d) Chemical wastes - comprised of discarded solid, liquid or gaseous chemicals. It is hazardous chemical waste if it is toxic, corrosive, flammable, reactive or genotoxic. It

is non-hazardous if it is consisted of chemicals other than those earlier mentioned.

e) Infectious wastes - include cultures and infectious agents from laboratory work; from surgery and autopsies of patients with infectious cases; waste that has been in contact with animals inoculated with infectious agent or has infectious disease.

f) Sharps - include needles, syringes, scalpels, saws, blades, broken glass, nails and other items that can cause a cut or puncture.

g) Pharmaceutical wastes - include pharmaceutical products, drugs and chemicals that have been returned from wards, spilled, outdated or contaminated or are to be discarded because they are no longer required.

h) Pressurized containers - include containers used for demonstration or instructional purposes that contains innocuous or inert gases and aerosol cans that could explode if incinerated or accidentally punctured.

The Metropolitan Council of Manila, now called Metropolitan Manila Development Authority, passed in 1992 Ordinance No. 16 which primarily regulates hospital wastes. The ordinance classified hospital wastes and provided for the color-coding of trash bags for identification of wastes. Black trash bag is for non-infectious dry waste; green trash bag is for non-infectious wet waste; yellow trash bag is for dry and wet chemical and potentially infectious waste,

pathological waste and sharps contained in punctured proof containers covered with lime solution; orange trash bags with trefoil sign are for radioactive waste that will be stored in the hospital until rendered inactive or disposed of in a manner prescribed by the Philippine Nuclear Research Institute.

Administrative Order 68-A series of 1989 provided for the classification of hospitals into tertiary, secondary, primary and training and non-training. This is the order issued to implement R.A. 4226(Hospital Licensure Law) consistent with E.O. 119 (Reorganization Act of the Ministry of Health). A.O. 68-A provided for the revised rules and regulation that now governs the registration, licensure and operations of hospitals in the country.

Republic Act No. 6969 provided for the Department of Environment and Natural Resources to be responsible for some categories of hospital wastes. The DENR is in-charge for regulating incinerators (design, operations, air emissions, and residue disposal). The DENR inspects hospital sites to ensure compliance from the regulations specified in R.A. 6969.

The Center for Advanced Philippine Studies had a research paper entitled Hospital Solid Waste Management: Two Case Studies in Metro Manila, Philippines. This research

focused on two hospitals, one private and the other public. It compared the two hospitals in terms of its hospital waste management practices. It outlined the process for observation and gathering of data for the hospitals. The study also explored the role played by small and micro-enterprises in the reuse and recycling of hospital waste.

A lecture of David Bradley entitled Health, Environment and Tropical Development found in the book Health and Environment pp. 126-147 stresses that environment is a major determinant of disease in developing countries, more than in the industrialized countries, and that environmental change is inevitable because of the pressures of population, the needs of the people and their hopes for a better life; and that these changes may lead to an increase of a certain disease and a decrease in others. Furthermore, it stresses that planning itself will not have any effect on the prevention of environmental degradation unless it is effectively implemented; and that early action on the problem is simply better and cheaper in the long run than the cure or than coping with or simply suffering the health consequences of environmental change.

Scope and Limitations

The study basically focused on the practices of hospital waste management. The scope of the study is limited to the observation of actual processes and the review of

prescribed laws relating to the waste management practices of the hospital samples.

The sample comprised of two hospitals found in Ermita, Manila. One is a public tertiary hospital while the other is of the private tertiary type. Tertiary hospitals are "fully departmentalized and equipped with the service capabilities needed to support certified medical specialists and other licensed physicians rendering services in the field of Medicine, Pediatrics, Obstetrics and Gynecology, Surgery their subspecialties and ancillary services" (A.O. No. 68-A, S. 1989.).

The hospitals chosen for this study was The Philippine General Hospital and The Manila Doctors Hospital. These hospitals were the only ones in the area chosen to be the sample. The Ermita, Manila area had been chosen firstly because of its proximity to the researcher. Secondly because the area is a blend of residential, commercial, and institutional elements which means that almost all walks of life are glimpsed from this area. Therefore almost all variations of hospital incidents could be experienced and dealt with by the hospitals.

The limitations of the study had been the inaccessibility of certain confidential documents that could have been helpful in the determination of the study's conclusion. Aside from this, the bureaucratic and corporate processes that are being followed in the hospitals caused delays in the conduct of the study. Budget constraints as

well as personnel's refusal to cooperate also made the study very tasking.

Significance of the Study

Hospital waste management is a very important aspect of health administration and its importance in the entire functioning of health delivery in a country cannot be undermined. It is quite ironic that such a crucial aspect of urgent concern had not been properly studied by most social scientist. Needless to say, the importance of this study lies on this very fact.

The studies related to development mostly focus on economic related aspects. It is therefore a growing concern that other fields should be the focus of inquiry to have a broader understanding of the reality of 'development'. This study hopes that it will be the start of a broader avenue of inquiry relating development studies to other aspects of society other than economics and politics.

Another importance of this research is the additional pieces of information that it will contribute to the few existing literature about the topic. The researcher hopes that this study will serve as a reference for other researchers interested in the topic.

This study would also benefit the hospitals concerned because, in this way, they would be able to know in what areas of hospital waste management they have to give more focus and special attention. It would drastically reduce

their efforts in terms of troubleshooting and looking for the weak area in their flow of hospital waste management process. The findings and suggestions in this study would help the hospitals to think of more appropriate systems of waste management or improve some areas of the waste management process should the study prove that there really is a need.

Lastly, this study would try to give suggestions and comments regarding the existing policies of hospital waste management to bring to attention the small voices of this marginalized sector and make the policy makers to pursue adequate action.

Chapter 2

The Laws Governing Hospital Waste Management and The Hospitals

The most pertinent government policy directly aimed at the alleviation of the problem of hospital wastes are the MMMDA Ordinance No. 16 issued by the Metro Manila Development Authority. This law provided for the classification of hospital wastes and the color-coding of trash bags for the identification of wastes. This ordinance is intended for all hospitals within Metro Manila whether private or public, research institutions, medical and dental clinics, laboratories and blood banks in Metro Manila handling and disposing infectious, potentially infectious and hazardous wastes. This law is the most prominent and known of all the laws pertaining to hospital waste management. The ordinance was created for: the prevention of nosocomial (hospital acquired) infection, for environmental protection, for protection of hospital personnel, other individuals going in and out of the hospital facilities, garbage collectors, scavengers and the community at large, for the maintenance of the ecological balance for the benefit of the constituents of MMA through discipline on sanitation and proper disposal of hospital wastes.

This ordinance provided for a standard storage procedure which stresses that all collected hospital waste/garbage should be tightly closed, segregated according to colors and handled/stored as follows:

1.Yellow trash bags should be placed in an enclosed area that should be secured with lock and key to prevent encroachment of scavengers and stray animals.

2.Black and green trash bags may be disposed off through Metro Manila's city and municipal collection and disposal system.

3.Orange trash bags with sign must be placed in an interim storage of the hospital which should be secured with lock and key to prevent encroachment of scavengers and stray animals until the radioactive waste become inactive or disposed of at the Philippine Nuclear Research Institute.

A central storage or transfer station shall be provided by the hospitals and must comply with the following site criteria:

1. The site must be located as near as possible to the center of waste production on the collection area in which it serves.

2. It must be accessible to municipality/city collection service.

3. It must be located in a place where the transfer operation could be done with the minimum public objection and in accordance with sanitation provision.

4. The location must meet local requirements such as zoning ordinance.

5. When transfer station is not feasible within the hospital compound, an arrangement with municipal collection

service must be provided in transferring /disposing hospital waste to disposal site.

Aside from giving standard procedures, the ordinance also provided for prescribed hospital waste/ garbage disposal system. Each hospital is responsible for the provision of the designated colored trash bags for waste collection. Furthermore, the hospitals are required to provide for their own means of disposal by using applicable systems prescribed by the agency. The acceptable systems are: hospital incinerator system, hospital enclosed burning pit, ground pits and sewage disposal system. Of course, this suggested systems must comply with the guidelines set by the MMDA.

Non-compliance with the ordinance comes with penalties. Violations of any provisions, rules and guidelines embodied in the ordinance would mean a fine of not less than Php100.00 but not more than Php2000.00 or imprisonment of not less than 5 days but not more than 1 year. Both fines can also be given depending upon the discretion of the court.

The second government policy most useful in the conduct of hospital waste management is the Manual on Hospital Waste Management authored by the Environmental Health Service of the Department of Health in 1997. This manual was undertaken because there was already a most evident problem regarding hospital waste. Those involved in

the waste handling had already started to voice their concerns and that the DOH had perceived that hospital waste management is truly a problem in which specific policies must be created. The agency recognized the importance of a specially tailored policy to answer the problems posited by hospital wastes.

Since MMDA Ordinance No. 16 was the first to be created, the manual followed the coding system adopted by the ordinance as well as the classification of hospital wastes. However, the manual was more specific on establishing the prescribed guideline for proper hospital waste management. The manual stipulates that some hospital wastes require pre-treatment process. The categories of wastes that need pre-treatment process are the pathological waste, radioactive waste, chemical waste, infectious waste, sharps and pharmaceutical waste. Pre-treatment process may vary from just applying disinfectants to autoclaving to the delay-to-decay process depending on the category of wastes.

The manual also provided for the drawing and descriptions of proper waste receptacles. Moreover, the manual emphasized the importance of the occupational hazards encountered by the hospital personnel especially those directly involved in the generation, segregation, collection and disposal of hospital wastes.

The manual has specification on almost areas and stage of waste handling. These areas and stages that the manual put into focus were: waste handling, storage (includes

discussion on waste receptacle and bulk storage, color coding of various categories and storage area), pre-treatment requirements, collection and transportation system (includes collection system preparation, selection of appropriate collection and transportation system and collection system implementation) and the disposal system (include discussions on selection of appropriate disposal system and disposal area considerations).

Unlike the MMDA Ordinance No. 16, however, this manual does not carry any penalty for non-compliance. When the Local Government Code was enacted, certain responsibilities of the Department of Health were given to the local governments. One of these responsibilities is the enforcement of laws. The DOH is now tasked to develop policies and formulate rules and regulations, develop standards and provide technical and logistics assistance; it has no power of enforcement - that power was given to the local government. The DOH can do spot inspections but any violations found by the inspecting team could not be used to give fines but rather, the DOH will just issue a recommendation letter to the local government for the local government to act upon. The most that has been done for the enforcement of the manual is the incorporation of some of its concepts and guidelines in the implementing rules and regulations on the Sanitation Code of the Philippines. In effect, if the hospitals opt not to follow the manual, they are free to do so. However, the hospitals are heavily

encouraged to follow because of a parallel law in the form of MMDA Ordinance No.16 and on some administrative orders relevant to hospital operations like the implementing rules and regulation for the Hospital Licensure Law.

The Hospitals

The two hospitals involved in this study are the Manila Doctors Hospital and the Philippine General Hospital.

Manila Doctors Hospital (MDH) is a private hospital co-owned by the Metrobank Foundation and other individuals. The administration of the hospital is put under the supervision of the Congregation of Saint Paul of Chartres. MDH is a tertiary hospital having a bed capacity of 300. Most of the activities of MDH are pay cases and it functions with an aim of not only providing health service but also of turning in a profit. Therefore, a greater percentage of the clients of the hospital belong to the upper class of the society who can afford to pay the services of both the hospital and the doctors.

Likewise, the Philippine General Hospital (PGH) is a tertiary hospital. However, PGH is government owned and is a public hospital. Most of its services are charity pay cases although it also have a pay ward; most of its activities are centered on providing good health service to the lower classes of the society. PGH has a 1000 bed capacity. Its Out Patient Department alone is situated in a 2-storey building. This gives a pretty big picture of the number of patients

PGH has to cater. PGH can accommodate thrice the number of patients MDH can, consequentially; PGH produces more hospital wastes than MDH and spends more on waste management than the latter.

The two hospitals are only one block away, being separated by U.N.Avenue and Padre Faura St.. It is interesting to know if the differences in hospital waste management practices of the hospitals can as easily be measured as the distance between them.

Chapter 3

Data Presentation & Observations in the Two Hospitals

The observation of Manila Doctors Hospital was first undertaken. Due to the relatively small size of the hospital, the study was able to observe the radiology section, the emergency room area, the operating room area, the delivery room area, the nuclear medicine section, the dietary section, the hemodialysis section, the medical ward section and the laboratory section. The observation of the areas range from about fifteen to thirty minutes to about an hour and to a simple tour around the area to interview the people in-charge of the department and utility people handling the wastes.

The waste segregation of hospital wastes starts in the user of the object. The nurse, the aide or the doctor is expected to know what kind of waste she/he is handling and to classify it based on the guidelines set by the ordinance and by the manual; they are also expected to know the risk entailed in handling them and as such, to separate these wastes accordingly. The task of the orderly is to preserve this state of segregation until it reaches the temporary storage where the waste collectors will next handle it. It is the job of the orderly to make sure that the wastes are tightly covered and secured from spillage and that it properly segregates the color of the waste bags according to the guidelines set by the government. In connection with this, the interview conducted with the orderlies revealed

that they are indeed properly well informed on the different classifications of waste. Further, everybody stressed the fact that they have workshops or seminars regarding this topic at a frequency of about twice a year.

MDH disposes its black and green bags through the disposal system utilized by the city of Manila. However, the yellow bags, which contain pathological and infectious wastes, must have special disposal attention which is why the hospital contracts the services of the Integrated Waste Management Inc. (IWMI) to do the disposal for them. IWMI is a private corporation which operates on the premise of profit. Every Monday, Thursday and Saturday, IWMI collects the yellow bags of MDH at about 7-8 in the morning. The bags are weighed in and MDH pays by the kilo. Every kilo costs Php40.00 as of December 1998. The hospital is reluctant to show the actual amount of money paid for biomedical wastes but the officer in-charge gave an estimate of about Php1.2 million /year. The total of last year's December hospital biomedical waste generation was 2,215 kilos which costs Php88, 600.00.

The bulk of the wastes generated in the radiology section are the fixer that is used to develop the film and the film itself. An interview of the person in-charge of the radiology section yielded answers that both the fixer and film are sold to small enterprises because these wastes contain traces of silver which are extracted by the buyer

from these wastes. Other liquid waste generated from the developing of the film is emptied into the drain.

The emergency room area of the MDH is fairly slow-paced with few patients and visitors in the area. The needles are put into a plastic gallon container. A check in the yellow bag receptacle saw used cottons, bandages and other materials that can be classified under the yellow bag. However, the container for sharps and the infectious wastes revealed that these wastes are disposed as is. The researcher was told that these wastes are immediately closed and tied once the bags are full, then, they are transported to the disposal site. There is also a receptacle for dry wastes which is wrapped in a black bag and for wet wastes which are wrapped in green bags. These receptacles contain no notice or classification of wastes.

No visitor is allowed in the operating room area and only patients are admitted inside. Thus, all wastes generated inside are of the pathological and infectious kind. Dry and wet wastes generated could only come from the employees inside the area. Fluids are simply poured in the drain connecting to the main sewerage. Inside the operating room, stainless steel receptacles are used. There are two stainless steel pails present in the area. One is for the liquid waste and the other is for the pathological waste. It is only after the operation that the nurses will transfer the wastes into the specified bags. Pathological wastes are put inside the yellow bag and the sharps are inside the

plastic gallon containers. No pre-treatment for these wastes is given. Dry wastes and wet wastes are on their proper bag receptacle.

The delivery room is specifically for women who are about to deliver babies or for women who are going to undergo an operation in their reproductive organ. The set-up in the delivery room area is the same as that of the operating room. No visitors are also allowed to accompany the patient. The most common pathological waste generated from the delivery room is the placenta and the blood and body fluids secreted released during delivery. There are also sharps, gloves, operating sponge and cotton swabs. The placenta is wrapped in a plastic and put on a special yellow colored receptacle. This is where the entire placenta is thrown. If the receptacle is already full, it is closed and tied to secure it and it is deposited in the final depositing area for yellow bags. No special pre-treatment is administered. Likewise, based on the interview and observation, the sharps are not also pre-treated. A used glove was found in a receptacle intended for black bag. It was from an interview that it was known that it is up to the employees to improvise or make their own flowchart of waste management. They only receive memos from the personnel office telling them to comply with such regulations and color coding schemes but it is the personnel themselves that regulate the waste disposal flow in their respective areas.

The nuclear medicine section offers services such as radioimmunoassay and gamma camera. These two processes involve the use of radioactive drugs. In the gamma camera, the patients are injected with a radioactive substance so that a reading somewhat akin to x-ray (although it is computerized) can be made. When the drug is administered to the patient, the patient becomes radioactive. The radioactive drug given to the patients are already in the syringe when the supplier delivers it. All the personnel have to do is use the injection to the patient. When the drug is taken away from the lead covered container, the barrel (the hollow plastic where the needle is attached) is covered by a lead contraption to prevent exposure to radioactivity. However, the personnel do not have any protective clothing when they are administering the drug. So, they are still exposed to radioactivity when they handle patients. The used injections are put back into the lead-protected container and the container is returned to the manufacturer. Observation revealed that there is no sign telling a patient or visitor that the container where he is putting his waste is only for pathological waste. This resulted to the mixing of wastes.

The dietary section produces leftover foods and wet wastes that are better disposed of using the green plastic bag. The leftover foods are gathered and sold to buyers outside the hospital. In the consequence, only very few wet waste are completely discarded as waste.

The hemodialysis section is the area where the transfusion of blood or treatment of patients with kidney problem through dialysis is done. The procedure involves injecting two tubes, one for incoming flow of blood in the body and the other is for outgoing flow of blood. The tubing from which the patient is connected is called a dialyser. The dialyser is connected to a machine that cleanses the blood. The dialyser is ideally for single use only but since it costs a lot, the personnel in the hemodialysis section clean the dialyser so that it could be used for about two to three times. In the course of observation, this is the only event in MDH where recycling is done. All used gloves are never recycled. They were immediately put into the yellow bag. All injections are always disposed of right after they were used once. An instance was noted that an informed nurse threw a used glove into the black bag.

The medical ward section is where the charity cases of MDH are placed. The yellow bag is located only at the nurses' station; what is accessible to the patients and the visitors are the receptacles with black bag and green bag. A look into these receptacles showed the mixing of wet and dry wastes. Biodegradable materials are in the black bag and non-biodegradable wastes are put inside the green bag. This is the finding even if the receptacles do have appropriate labels and instructions. A look inside the big black bag used by the utility in the collection of all black wastes

revealed a broken dextrose bottle with its shards of broken glass.

The laboratory section is where all analysis of all specimen extracted from the patients is done. Wastes from the laboratory include expired blood, cultures, blood samples, test tubes, slides and other paraphernalia used for the analysis. According to the utility people in the laboratory section, expired bloods in the blood bags are directly put in the yellow bag without pre-treatment. The laboratory has a machine that burns the syringe so there is no need for a plastic gallon container. The cultures are autoclaved before it is thrown into the yellow bag. Blood specimen is directly thrown in the sink and is followed by a concentrated solution of chlorine. There were instances that a broken pipette was placed in the black bag and food waste was thrown in the black bag by an intern.

Interviews with other utility people revealed that dextrose bottles, after being used, are being kept in storage where they are purposely broken. These broken glasses are being sold to private buyers when it had already accumulated. A trip to the storage area of these bottles showed an enclosed locked area with square holes where the bottles are thrown or inserted. The cartons from medical supplies are stored in a room where they will be sold at a later date.

A trip to the temporary storage area of the black and green trash bags revealed a square closed area that can only

be accessed through a short stair. Before climbing the stairs, there is already a big notice specifying "for black and green bags only". The space opens to a door fronting U.N. Avenue where the waste collection truck maneuvers. This place is considered as the back of MDH already. The temporary storage for yellow bags, while waiting for their collection by the Integrated Waste Management Incorporated, are two big black plastic containers labeled "for hazardous waste".

During the collection of the local garbage trucks of the black and green bags of MDH, the observation revealed that the garbage collectors open those bags and take the wastes that can still be sold as on small enterprises. An example of such wastes is the plastic gallons. Furthermore, the interview learned that the truck used for the collection of garbage does not have any mechanism for segregating the black and green bags. Both the black and green bags are put inside the truck and they are compressed once inside the truck but compression of these wastes does not mean segregation from each other.

The Philippine General Hospital

The second area of observation was the Philippine General Hospital. Due to the large capacity of the hospital, the study was only able to observe the radiology section, the laboratory, the operating room and delivery room, the

emergency room, the central supply room and the three different wards and the disposal site.

Basically, the philosophy behind the waste segregation and disposal practices of the PGH is the same as that of the MDH. Those who have the first hand encounter or the generator of wastes themselves must know the kind and classification of the waste that they are handling. They are also expected to segregate these wastes properly when these wastes are being thrown in the waste receptacles. The primary job of the orderly is to make sure that these wastes do not overspill and that when plastic bags must be changed, the bags containing wastes are properly closed and secured. It is also the orderly's responsibility to make sure that the transport of waste must be safe and that in the disposal site, the proper segregation of wastes must still be maintained. PGH also has algorithms that chart the course of proper hospital waste disposal. Aside from written memos and policies, this additional flowchart is the most concrete way to show the plan of activity regarding hospital waste management.

As with the MDH, PGH disposes its black and green bags through the local waste disposal system. Everyday, the waste collection truck visits the hospital and collects all its black and green bags. The disposal of biomedical wastes generated by the hospital is contracted to IWMI, the same company contracted by MDH to dispose their biomedical wastes. The IWMI collects the yellow bags of the PGH

everyday. PGH pays Php41.80/kilo of biomedical waste. Last year's total cost was Php3,644,767.2. The December 1998 expenses for biomedical waste of the PGH cost Php246, 766.30.

The main wastes generated by the radiology area are the chemicals used for developing the film especially the fixer. As has been written earlier, the fixer contains silver content that can still be considered as valuable. The old practice was that the fixer is put into containers and surrendered to the Property to be sold to interested people. However, the section noticed that it just gets stuck in the Property and the containers just get damaged. The disposal of the fixer through selling it is not given much attention so what the section is doing now is that they throw the solution directly into the drain. Old films are being submitted to the Records Management and Archives Office, another government agency that is responsible for finding a bidder for these films. A brief tour of the radiology section revealed that some areas needing yellow bags and receptacles are provided either with a black bag or a green bag. Needles are put into plastic gallon containers.

The laboratory section of the hospital yields the same wastes as those of the laboratory section of MDH minus the syringe and injections. No pre-treatment of the specimen was made before disposal to the yellow bag.

The operating room and the delivery room are located on the third floor of the PGH. A quick tour of the delivery

room and operating room revealed that plastic colored pails with the colored plastic bags are used inside the room. However, the black and green bags are used interchangeably. The liquid wastes generated are poured down the drain with a mixture of disinfectant. The placenta is wrapped in yellow plastic bags to be disposed of as pathological waste. No treatment is given to these wastes. The needles are placed in plastic gallon containers. The gloves used by the doctors during the operation are put in one container because these gloves are still recycled to be used again. The activities inside the operation room require just one use sterile gloves. However, since good quality gloves are being used inside the operation and delivery room, these gloves are being recycled for the use of other departments. Some tubes are also recycled again instead of being disposed automatically so the operating room personnel had devised measures to clean these tubes for the safety of the patients. The operating room and the delivery room also has a general storage are for the yellow bags in the third floor. There are two big black receptacles in which all the yellow bags generated by the operating and the delivery room are put inside. The orderly brings these receptacles down to the temporary disposal site of the yellow bags.

The emergency room of the PGH had a very different atmosphere than that of the MDH. Here, yellow bags are placed almost within reach of everybody. Small receptacles with yellow, green and black bags are strategically placed

along the entire emergency room. It is accessible to both the hospital personnel and the patients and their visitors. Oftentimes, the emergency room is filled to capacity and the doctors and all the personnel involved are very busy. Some of the injections are recycled. The injections that are recycled are those used only on administering drugs and those that had not been in contact with the blood. A look inside the contents of the green, yellow and black bag reveals numerous errors in the segregation stage. Wrappers of food are placed inside the yellow bag. Some wet wastes are inside the black bag. However, it must be noted that here, the black and green bag are sometimes used interchangeably especially if there is a shortage in the supply of the right colored plastics. The tubing for the dextrose are placed inside cartons. It is found on more than one instance that the cartons are used as waste receptacle for the tubing of the dextrose. Further, a quick look on these tubing revealed that the needles are not covered which means that if the person handling it is not informed or some form of accident happens, the person handling it is more at risk to be hurt.

Interviews with the orderlies assigned in the emergency room shows that the utility men segregate the wastes before putting it in the big plastic bag. This is an additional threat to the health of the utility men and this practice must not be done. Reasons for their segregation indicate their concern for the big amount of money that the

hospital pays for the disposal of the yellow bags aside from the fact that they know that wrong segregation of hospital wastes is a violation of the prescribed policies.

The central supply room (CSR) is the department in-charge for the sterilization of the paraphernalia used in the conduct of health service. They sterilize scissors, forceps, provide distilled water for the wards and also sterilize and autoclave gloves that are the gloves used in the wards. No other people aside from the personnel involved in the CSR are allowed inside, transactions are made outside and as such the production of waste aside from those generated from the hospital paraphernalia are produced by the staff alone. A look in the black bag revealed the presence of bio-degradable wastes and wet food wastes; this is even if there is already a notice classifying the wastes which is written in Filipino.

Three wards were visited by the study -ward 2,4&12. On all wards, the system is almost the same. Needles are placed in plastic gallon containers. Yellow bags are in the nurses' station. Broken vials are also deposited in the container for the needles since this is also considered as sharps. Small bottles and the dextrose bottles are segregated because these will be sent to the CSR for sterilization. These bottles will be given to the patients when a specimen is asked from them. However, the black and green bags do not match sometimes especially if there is a shortage of plastic bags of a certain color. Segregation in the wards is not as

strict as in other areas mainly because of the fact that there are so many people around the area who are not really involved in the provision of health services and, thus, do not know the proper waste disposal system. The segregation system could not stand the number of visitors and strangers that are going in and out of the wards. However, actions made by the hospital personnel to minimize the "un-segregation" of dry and wet wastes is the conduct of ward class once a week. This ward class informs the patients and their visitors of the kinds of wastes and the proper disposal of these wastes through the use of presentation materials such as the video.

Visits made on the temporary storage area of both the yellow bags and the black and green bags are often in the course of about one and a half-week. These visits provided a big amount of input to knowing the effectivity of the hospital waste management practice of the PGH. The location of the storage is basically hidden from the public. It is located at the back of the hospital's pharmacy. Garbage collection can be done with the public unawares. The temporary storage for both the black and green and the yellow bags are open sites. It is not enclosed and can be easily reached by whoever purposely visits the site. A look at the collection of yellow bags showed that some of them are already open and had already spilt. Likewise, the cartons seen in the emergency room with the tubing inside are also found there and it was not covered nor wrapped in a

yellow bag. The containers for the sharps are not resealed or covered; some of the containers are properly labeled as sharps while the others are not. Also, some wastes inside the yellow bags could be distinguished as wrappers or take-outs of popular fast-food chains such as Jollibee. Some wastes do not have to belong on the yellow bag yet they are there.

An interview with the person in-charge of the segregation of wastes in the storage area revealed that he is going to open the yellow bags that do contain wastes that should not be there because it just adds to the weight of the garbage that has to be weighed by IWMI. Another interview with other utility men assigned in the site confirmed the practice of opening these bags to take out what should not be there and that they use gloves to protect themselves.

The temporary storage for the disposal of the black and green bag is not far from the storage area of the yellow bags. There, black bags and green bags are placed one atop one another. A video used in the ward class shows that when the waste collection truck comes, everything is mixed. There are no delineation between the green and the black bag. Also, the observation had seen that the employees of PGH itself which are assigned there opens the black and green bags to look for things which could be sold. Examples of the things that the utility men are looking for are the aluminum cans and the plastic dextrose bottles that they claim can

still be sold at waste recycling enterprises. The money they raised from this practice is already theirs. On a day, one utility claimed that he could raise about Php200.00 from this waste refuse. One utility man was seen opening the green bags which cam from the dietary section. He claimed that he is opening to look for foods that he will feed to his dog. In the black and green bag waste disposal site, the utility men were opening the bags without any gloves or protective measures at all.

For both hospitals, it is generally the nurses who know best the process of waste management. Second to them is the utility people in-charge of disposing the hospital wastes. The doctors are simply informed of these classifications through memos. The other actors that are involved in the disposal of hospital waste are the interns having their clinical training at the hospitals and the patients themselves and the visitors of these patients.

It was also observed that in MDH, strategic places along corridors are placed with waste receptacles with black plastic bags, though the waste receptacles are not necessarily green or black. In some areas of MDH, blue colored receptacles are used to stand for black. In PGH, waste receptacles are also strategically placed but the receptacles have notices such as "dry waste". Another observation was that there are no posters proclaiming these waste segregation practices. Although PGH conducts ward

class and the receptacles have notices, it is still different from having posters around for everybody to see.

Spot inspections made by MMDA in MDH were done at least once a month. However, an interview with some hospital personnel in the PGH reveals that MMDA inspection had not been as active as it was before.

Chapter 4

Analysis and Conclusions

The observations presented by the study brought a lot of areas in which concern and attention must be raised not only because some constitute a violation of some of the rules laid down by the MMDA Ordinance No. 16 and by the Manual on Hospital Waste Management but rather that they cause a threat to the immediate people in contact with the waste.

The Manila Doctors Hospital

Observations from the Manila Doctors Hospital revealed that many of the violations witnessed were those committed by individuals. Most of the waste mixing were on waste receptacles that are accessible to hospital personnel, the patients, and the visitors. Only the hospital personnel are taught of the proper waste disposal and not the latter two. So it is really no wonder that waste mixing could occur at this level. However, on areas not accessible to the public where the violation of waste mixing was still committed, the problem lies on the personal differences of each of the personnel. Throwing waste in their right places simply calls for personal volition in the part of the thrower. Since there is no deficit in terms of information dissemination at the side of the hospital for its personnel, then the blame

lies on the capacity of the hospital personnel to integrate such a practice in their own personal routine. This is a problem that the hospital has to contend with. It must be able to transcend individual differences and biases in order to make all its personnel imbibe the practice of hospital waste segregation.

It was also noted that in the different sections of the hospital, whether in the operating room, the laboratory or the wards, there exists no uniform system of disposing wastes. Earlier, an observation was reported that a hospital personnel said that it is left to them on how to carry out the memo issued from the personnel directress's office regarding the observance of the ordinance and of the manual. Therefore, there is a need to evolve a standard operating procedure to carry out proper hospital waste management. Although there already exists a system of waste management, albeit an unwritten one, there is a need to put things into black and white which could take the form of constructing a general flowchart for hospital waste management. This way, the personnel would have something to refer to and this point of reference would be uniform throughout the hospital. When mixing of wastes would be committed, the personnel can be duly told that a SOP for waste segregation exists and that SOP must be followed.

Moreover, there is a need for the hospital to properly label their waste receptacles that are accessible to the public so that the public may be able to distinguish

the kinds of wastes they are disposing and in what receptacles these should be thrown. The hospital could not just claim that all fault lies at the public's hardheadedness and that the latter is simply violative of the rules when the public is ignorant of it or knows little of its importance. Prominent signs on strategic places regarding waste segregation will raise the level of public awareness not only on hospital wastes but also on general wastes as a whole. Also, something akin to public awareness program must be launched. This calls for posters advising the public on the different kinds of wastes and their different kinds of disposal.

There is also a need for the pre-treatment of various pathological wastes. The manual requires for the pre-treatment of such wastes prior to disposal. However, it seems that the collective thought is that these pathological wastes are going to be disposed of by a contracted paid party, a direct disposal would be all right. However, the manual requires for a pre-treatment because it also wants to protect the people who are handling the wastes prior and during the collection of such pathological wastes.

The interchangeability of the plastic colors must also be given attention. It must be noted that in the minds of the many, even that of the orderlies, there is a perception of "it is just okay to interchange the black and green bags because they are not dangerous anyway". This kind of perception is always worrisome. If a notion already exists

that substituting the colors is standard practice, then who is to say that this kind of thought will not continue to be applied in the substitution of the yellow bag? Although there is no observation supporting this idea, this is still a valid possibility and something that must really be given a serious thought. Once the line is crossed between interchanging the yellow bags for other colors, then, there is a possibility of a mix-up and the ending of pathological wastes in the disposal storage of general wastes.

In the temporary storage area of the black and green bags, it is evident that no opening of trash bags can be done. Also, the yellow bags are properly secured in its temporary big plastic container.

However, the same could not be said during the collection of the waste trucks. The garbage collectors are opening the bags to collect for themselves the scraps and wastes that can still be sold on waste recycling enterprises. Although this is already beyond the jurisdiction of the hospitals, it must be noted because it essentially defeats some of the purpose of the guideline. The guideline provides for the provision that no scavenging must be allowed in the area yet here are the garbage collectors who open the trash and scavenge what they could. It is not certainly the hospital's fault yet this situation must be given attention.

The Philippine General Hospital

Observations in PGH yielded results such that violations committed based on the ordinance and the manual were much more in number than those committed by MDH.

Before going to an analysis of the hospital waste management at the PGH, it must be pointed that one very obvious difference between the operation of PGH and MDH is the presence of a central supply room in PGH which processes the used gloves to be used again. In MDH, gloves are automatically disposed of. This kind of practice is not necessarily a violation of the ordinance or the manual, however, this does point out the gross difference between a public and private hospital. A private hospital has the funds while a public hospital must be able to use all its resources to the maximum so as to ensure its continued existence and serve its purpose. Even the emergency room recycles some of the disposable injections that had been used. As had been said before, injections that had not been in contact with blood and those used for administering drugs can be recycled. This is the closest situationer that could be given to show the very immediate need of funding for PGH.

The most obvious violation of waste mixing in waste receptacles is very often. This could be accounted by the volume of the people visiting and inhabiting PGH everyday which are not all hospital personnel and do not know the proper waste classification and segregation. This is a problem PGH has contended by providing waste receptacles

labeled with big bold letters. However, this does not fully prevent the mixing of wastes since it is evident from the observations that these incidents still happen. What is the worse thing about waste mixing is that not only wastes are mixed on black and green bags but also on yellow bags. It was mentioned in the observation that some yellow bags contain food wrappers. This is especially frustrating because the disposal of these wastes requires payment. If unnecessary wastes are mixed with the yellow bags, the hospital consequentially spends additional unnecessary pay. Added to the fact that the PGH and the whole of the government are on a very tight budget these days. This simple waste mixing costs a drain on the already meager budget of the hospital.

Another one obvious violation committed by hospital personnel is the disposal of dextrose tubing with the needle in it in cartons. The ordinance and the manual specifically provide for the disposal of this kind of waste into a "puncture proof container prior to pre-treatment and disposal" (DOH, 1997: 9). This provision is very reasonable and very much needed considering the risk entailed when the orderlies handle these needles. Also, disposal of the sharps and the wastes disposed in yellow bags do not undergo pre-treatment process as required by the manual.

The storage site of the PGH reveals much more discrepancy that have to be given more attention. The PGH storage site for the yellow bags is an open site wherein the

yellow bags are just piled one atop one another. The manual requires "a metal or plastic air tight bin storage separated from general wastes"(DOH, 1997:9). The PGH is definitely way off the requirement. Although the wastes from the operating room have their own receptacles in the open site storage, the rest of the yellow bags are just left there open. Some of the consequences of this open site storage are the spilling of some of the yellow bags and the opening of the plastics. Since yellow bags contain potentially hazardous wastes, this kind of situation is definitely not acceptable.

As with the storage of yellow bags, the black and green bags storage are also open sites. This set-up for both makes it easily accessible for anybody who has a mind to open the bags for any reason at all. As a consequence, the utility men assigned in the storage area, thinking that they should help minimize the cost of the yellow bags, sort out these bags. This is a very unhealthy practice. Although no restriction in the manual prohibits such an act in the storage area, the manual prohibits sorting, picking and salvaging in the disposal area. From this alone, the study can infer that the policy had not foreseen the possibility of having scavengers right inside the premises of the hospital but it still does not sanction such an act as evidenced by the provision of not allowing it in the final disposal area. If sorting, picking and salvaging is not allowed on the disposal site, it is therefore only rational to assume that sorting, picking and salvaging in the

hospital premises will also not be allowed. A supporting data would be that if MDH spends Php1.2 million /year for biomedical wastes, divided by Php40.00 (for every kilo of waste), then MDH has a total annual output of 30,000 kilos of biomedical wastes. We must take into account that the MDH yellow bags are not sorted so any waste mixing stays as it is. On the other hand, PGH spent Php3,644,767.2 last year for biomedical wastes. If we divide this with Php41.8 (per kilo of biomedical waste) then PGH has a waste generation of 87,195.4 kilos last year. Comparing the two hospitals waste generation, PGH generates thrice as much as MDH. This figure is already big but it must be considered that aside from having thrice the bed capacity, PGH also has bigger sections - bigger laboratory, bigger operating rooms, bigger emergency rooms. Its OPD is already a two-storey building. By all accounts, one could reasonably expect that waste generation of the PGH must be bigger than thrice that of MDH. A reason why this is the case because PGH does not automatically throw the gloves, it recycles it for further use. But this reason could not account for such a big discrepancy. Gloves could not weigh that much. Much more plausible explanations are that the hospital personnel of PGH are indeed really good in minimizing their waste or that the utility men assigned in the storage area are very good in sorting and picking wastes that must be excluded, or both explanations are applicable.

It is a good thing that the utility men realizes the import of hospital waste and segregation and its corresponding huge expenses but it is not reason enough to allow the utility men to expose themselves to health hazards. The root must be traced. If only the nurses, the orderlies and the doctors know the proper disposal of yellow bags, then it is only these people who must be given access to such bags. The emergency room has a yellow bag almost everywhere that is accessible to all, it must be restricted to areas in which there is minimum public access so as to minimize the waste mixing in the yellow bags.

It is not only the yellow bags that are sorted and picked upon by the utility men. Even the green and black bags do not escape their notice. This time, when green and black bags are opened, the utility men take whatever they would be able to sell to waste recycling enterprises. The money goes to their own pocket. The study acknowledges the importance of an extra income for the utility men of the hospital. However, additional income should not come from this practice. The hospital as a health institution must first and foremost protect the health of its personnel. It is on both the hospital and the personnel's interest that such protection and prevention must be carried out. The study reiterates from the introduction that hospitals can indeed be a breeding ground for diseases if one is careless. Granted that the utility men are doing the sorting and picking practice for some time now and that no disease or

ill-health had come upon them, it is not still reason enough to allow such a practice. Not only that, an inspection by the concerned agencies and the discovery of this practice could warrant a fine or any other form of penalty to the hospital. Aside from this, no matter how adequate is the waste management system of the hospital to answer the needs of the community and no matter how appropriate, when its effectivity as a measure to prevent the spread of disease is sacrificed, then all the efforts would also be for naught.

PGH also has a problem in the supply of plastic bags. Most often, there is a shortage of a particular color of bag so the orderlies substitute it with other colors. Black and green are usually interchange especially if there is a shortage of one color and abundance in another. However, this interchanging had already extended the substitution of yellow bag with the green or black bag sometimes. One has crossed the boundary between safe disposal to potential threat. It is one thing when both non-infectious, non-pathological wastes are interchanged with one another; another thing too when what potentially infectious and pathological wastes are exchanged for either dry or wet general wastes. What if there is a still untutored garbage collector that mistakenly treated the pathological wastes in the green bags as general wastes? Who would be blamed? These considerations must be given sufficient thought.

It is a good thing on the part of the hospital that it has a standard operating procedure in disposing wastes. Its algorithms (refer to appendix) serve as the flowchart for the proper flow of the waste management process. Perhaps it is also because PGH is part of the government that it must at all times follow all the directives issued by other government agencies. Before private entities are required to follow, the concerned agencies must first comply. This could account for the efficiency and completeness of the hospital waste management process when written in paper. However, no matter how beautiful it appears on paper, it would only serve its purpose if it is implemented effectively and strictly followed.

Another thing that must be called to attention is the amount the hospital pays in order to dispose its yellow bags. The MDH pays Php40.00/kilo while PGH pays Php41.80/kilo. There is such a big difference in the price considering that the PGH generates wastes about thrice than the MDH. It would have been logical to conclude that PGH would have the cheaper deal since it has more wastes - the greater bulk, the lesser price. This situation is very confusing. It defies the laws of economics. IWMI collects thrice a week at MDH while its collection at PGH is daily but PGH has the raw deal. For an institution claiming to be under extreme need of funding, this is such a generous gesture to give to a corporation aimed at making a profit. This discrepancy must be looked upon.

For both hospitals, it must be noted that the collection trucks do not have a mechanism for segregation of the green and the black bag. This means that all the efforts from the top level down the chain of command for the proper segregation of wet and dry wastes could only end up as futile. Perhaps this is the reason why both hospitals do not see the difference in interchanging the green and the black bag since this is the case. Since the MMDA is the implementing agency, it must look upon this angle to provide better service for the population and to provide for a better treatment of the environment as well. After all, the suffering is not only felt by those who contract the disease from these wastes but also by the environment where all these wastes are dumped.

The Law

The ordinance still achieves its purpose but the implementation is in much need of strengthening. It is the MMDA that had imposed segregation. The hospitals, therefore, expect that the segregation that had started from their institution would continue until it reaches the final disposal site and that the segregation would pave the way for easier recycling. But what happens is that the MMDA itself does not make use of the opportunity presented by the proper segregation of wastes. It is very frustrating to see that the wastes that had been so carefully and duly

segregated be indiscriminately lumped aside one another. It certainly does not provide the hospital personnel the encouragement to always observe the proper segregation of waste. Further, its enforcing mechanism is a little weak. With a very small pittance of penalty and fines added to the fact that they are not always doing their spot inspections. This kind of performance could not evoke real threat and apprehension to the hospitals.

As for the manual provided by the Environmental Health Service of the Department of Health, what it needs is an enforcing mechanism to require the hospital to really follow their guidelines because not doing so corresponds to a certain punishment. Since the manual came from the Department of Health, what is stated there were already specifics and are basically the standards. However, the manual must also provide for restrictions specifying that no sorting, picking or salvaging of wastes may be allowed at any stage of waste handling, processing or disposal. Should the agency allow otherwise, it must provide the proper guidelines.

Conclusion

The study realizes that there is indeed a gap between the actual practices of the hospitals and the prescribed government rules and policies. Further, it has found out that a bigger fund makes for a more effective waste management system as proven by the examples between the MDH

and the PGH. And that, indeed, a private hospital has more funds to allocate for waste management process because their source comes from profits generated by the entire hospital operation whereas a public hospital has to rely for allocation of funding from the government and this allocation is limited and fixed.

With regards to the adequacy, appropriateness and effectivity of the waste management process of the hospitals, the waste management system of Manila Doctors Hospital is definitely adequate to accommodate the waste generated by their hospital. Since there has been no problem in terms of overflowing wastes, fouls smells and existence of scattered wastes in the immediate vicinity of the hospital, then, its system is still adequate. In terms of appropriateness, it seems that the system is easily understood and followed by the hospital personnel. Its effectivity, however, is not complete. It achieves part of its main objective that is to prevent the spread of diseases and environmental protection and protect the health of its personnel, however, the garbage collectors are not protected because it is by their own volition that they open the bags and willingly endanger themselves.

For the PGH, its system is also still adequate because there had been no massive overflowing of wastes and at a certain extent segregation is followed. Likewise, there had been no problem in terms of foul smells or scattered wastes in the vicinity. Its system is also appropriate since it is

still easily understood and followed. Its effectivity had been jeopardized a little because it could not protect or prevent its personnel assigned at the storage to refrain from sorting or picking the trash bags whether for own gain or to help decrease the amount of wastes in the yellow bag. Whether this activity is sanctioned in the higher level of administration or not, the prevention of the spread of disease and environmental protection and saving of money was achieved at partly the risk of the personnel.

Chapter 5

Summary & Recommendations

The study called for an observation of hospital waste management of two hospitals located in Ermita, Manila as based from MMDA Ordinance No.16 and from the Manual on Hospital Waste Management. One is public, represented by the Philippine General Hospital and the other is private, represented by the Manila Doctors Hospital.

For both hospitals, it was observed that it is common to have an interchanging of the colors of the bags. As these are color-coded bags, interchanging would result to confusion. An example is the interchanging of black and green bags. However, for the PGH, the black and green bags are sometimes substituted in lieu of the yellow bags, which have special disposal considerations. This kind of interchanging poses a graver threat than the interchanging of black and green bags.

On the other hand, most violations of waste mixing, that is, putting dry wastes into green bags and other such examples, are committed by the majority of individuals who come in and out of the hospitals.

Wastes disposed in the yellow bags as well as the sharps are not generally given the required pre-treatment process.

For MDH, sorting, picking and salvaging of wastes i the green and black bags are done by the garbage collectors of the local government.

For the PGH, its own utility personnel assigned on the storage area do this practice firstly.

The amount charged by IWMI per kilo of yellow bag between the PGH and the MDH has a big difference with the MDH having a better deal.

Lastly, the study saw that individual participation and concern is very much needed for the success of proper waste segregation.

Recommendations

Based from the observations, data gathered and analysis made, the research recommends that the MDH create their own flowchart or standard operating procedure uniform in all areas of the hospital so that there would be a point of reference for all their personnel. As of the moment, each department has its own system and flow of waste disposal (although there are many similarities too). Further, it recommends that the MDH gives a closer look on the collection of its garbage by the collection truck and on the salvaging practices of these collectors.

For PGH, the study recommends an inquiry into why PGH pays more to IWMI to dispose its waste compared to MDH. Since it is evident that PGH has a greater waste generation, one wonders why PGH is charged higher. Also, the study calls the attention to the practices of the hospital's personnel in the storage area. It must be properly decided whether the administration will continue to allow such salvaging

practices. The study realizes the additional income this kind of practice generates for the utility men but the study believes that this is not the proper solution. The study calls for an additional budget for waste management as well as for PGH as a whole. It also recommends that if wastes could really be turned to cash, the hospital must start practicing it and allocate the raised funds for the use and benefit of those involved in the program. It was noted that in MDH, almost all-bulk waste that can be sold are handled and sold by the administration, thus, they recover a portion of the funds.

For the success of the policy, the study recommends a massive information campaign to make the population aware that such classifications exist and that such measures are really important in order to safeguard their health and protect the environment.

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R.A. 6969.

Interviews:

Interview with Mr. Henry Galang, Maintenance Chief, MDH.

Interview with Mr. Riego de Dios, Section Chief, Environmental Health Service, DOH.

Interview with Ms. Janet Herrera, Public Relations Officer, DNET, PGH.

Interviews with the staff of MDH and PGH including the utility men and department heads.

Interview with the garbage collectors of Leonel Waste Management.

APPENDIX A
CORRESPONDENCE

COLLEGE OF ARTS AND SCIENCES

UNIVERSITY OF THE PHILIPPINES MANILA
Padre Faura, Manila

December 5, 1998

Sister Mary Philip Galeno, SFC
Administrator
Manila Doctors' Hospital
667 U.N. Ave., Ermita

Lab - ang — Nursing Service
X-ray — OPD
Dietary — HS
Housekeeping — Dialysis
ER — Nuclear
OR

Madam:

Greetings!

I am a graduating student from the University of the Philippines Manila majoring in Development Studies. As a pre-requisite for the course, we are required to make a thesis. In line with the current concern on finding appropriate and cost-effective solutions to remedy the country's increasing waste problem, I decided to write on "Hospital Waste Management: A Case Study of the Three Tertiary Hospitals in Ermita, Manila". Manila Doctors' Hospital is one of the three hospitals in my study.

May I therefore request for your kind permission to allow me to observe in your hospital for one week from Jan.11- Jan.17, 1998? I would be observing your hospital's waste management and disposal practices. This one-week in your hospital would also provide me the opportunity to interview the head of the department and the personnel involved in waste treatment, management and disposal. Moreover, I would also like to request for copies of your policies and other pertinent data and statistics on waste management and disposal.

Since we have a timetable to follow and a deadline to meet, I would appreciate it if I could hear from you at the soonest time possible. My contact number is 523-25-63.

I appeal for your positive response and thank you for the accommodation that you had extended me.

Sincerely,

Marie Cris P. Chieng
BA Development Studies

Endorsed by:

Prof. Edberto Villegas
Thesis Adviser

MANILA DOCTORS HOSPITAL
667 United Nations Avenue
Ermita, Manila

TO	**Department Heads of** - **Laboratory** - **Heart Station** - **X-ray** - **Hemodialysis** - **Dietary** - **Nuclear Lab.** - **Housekeeping** - **Nursing Service** - **Emergency Room** **(for the Nursing** - **OR** **Stations)** - **OPD** LINEN/LAUNDRY
FROM	**The Personnel Office**
SUBJECT	**Request to observe Hospital Waste Management**

The bearer. **MISS MARIE CRIS P. CHIENG**, is a student in UP-Manila majoring in Development Studies, conducting studies on Hospital Waste Management.

Please allow her to observe in your department/unit on any of the dates from now, on how you manage your waste disposal.

Thank you for your kind assistance.

God bless you.

Signed:

Sister Marie Leonie Retoria, SPC
SISTER MARIE LEONIE RETORIA, SPC
PERSONNEL DIRECTRESS

DIVISION OF NURSING RESEARCH AND DEVELOPMENT
Department of Nursing
Philippine General Hospital

LETTER OF NOTIFICATION

DATE: Feb. 11, 1999

TO: The concerned N VI / N IV

FROM : DEOGRACIA M. VALDERRAMA
Nurse VII, DNRD
Director II for Nursing

RE : UPCOMING NURSING RESEARCH UPCN PLM SPCM (UPCAS)

For your information, a ~~nursing~~ study will be conducted in the (area) all areas on the proper disposal of waste

The study, entitled Hospital Waste Management

will be conducted by Marie Cris P. Chieng, BA Dev. St

The proposal was approved by the DNRD. It will not impact on medical / nursing care and will of course require the informed consent of the subjects. The research protocol has been submitted and revised according to our criteria for scientific investigation.

We would greatly appreciate your support of the investigators. If you have any questions, please do not hesitate to call the DNRD. Be rest assured that the students will be supervised by DNRD while undertaking the above study.

Thank you for your support and cooperaiton.

APPENDIX B
RELATED LAWS & RULES GOVERNING HOSPITAL WASTE MANAGEMENT

File

PANGASIWAAN NG KALAKHANG MAYNILA
(Metropolitan Manila Authority)
Office of the Chairman

METROPOLITAN MANILA COUNCIL

ORDINANCE NO. 16
Series of 1991

REGULATING THE MANAGEMENT, COLLECTION AND DISPOSAL OF HOSPITAL WASTE AND THOSE OF SIMILAR INSTITUTIONS IN METROPOLITAN MANILA

WHEREAS, the Metropolitan Manila Authority is mandated by EO 392 Section 1 thereof to deliver basic urban services one of which is sanitation waste management;

WHEREAS, the hospital waste/garbage of more than 172 private and government hospitals in Metro Manila when properly managed can prevent the spread of viral and bacterial infections and therefore reduce environmental nuisance and minimize health hazards;

WHEREAS, results of several studies conducted to determine the observance of safety measures/standards in hospital waste disposal showed that majority of hospitals in Metropolitan Manila are getting rid of their infectious, potentially infectious and radioactive solid and liquid wastes without proper disinfection and treatment through Metro Manila's collection systems which are the open dumps and/or through the hospital's plumbing system into septic tanks to sewerage facilities;

WHEREAS, the number of hospitals with incinerators are almost negligible while some other hospitals burn their uncollected general wastes within the hospital compound resulting in air pollution;

WHEREAS, the "sharps" such as needles, syringes, salpels, saws, blades, broken glass and nails which are either thrown away with the general wastes, burned, buried, stored for specimen use or sold for 'recycling', endanger hospital personnel, garbage collectors and scavengers;

WHEREAS, as a consequence of such unsatisfactory hospital waste disposal system it has become necessary for the Authority to take immediate steps and/or initiate measures which will improve the hospital management, collection and disposal of wastes particularly the infectious ones;

NOW, THEREFORE, be it ordained by the Metro Manila Council, as it is hereby ordained, pursuant to Section 2, Executive Order No. 392, that:

SECTION 1. Objective of the Ordinance

a. Prevention of nosocomial (hospital acquired) infection
b. Environmental protection
c. Protection of hospital personnel, other individuals going in and out of the hospital facilities, garbage collectors, scavengers and the community at large
d. Maintenance of ecological balance for the benefit of the constituents of MMA through discipline on sanitation and proper disposal of hospital wastes.

SECTION 2. Coverage

1. The provisions of this ordinance, the standard requirements/guidelines enumerated hereunder shall apply to all hospitals in Metropolitan Manila whether owned and/or operated by city/ municipal government and whether or not receiving assistance from the Metropolitan Manila Authority, to wit:

a. Ospital ng Maynila
b. Quezon City General Hospital
c. Ospital ng Kalookan
d. Pasay City General Hospital
e. Parañaque Community Hospital
f. Ospital ng Makati
g. Mandaluyong Medical Center
h. Pagamutang Bayan ng Malabon
i. Such other city/municipal hospitals as may be established in Metropolitan Manila

2. All private and other government hospitals, research institutions, medical and dental clinics, laboratories and blood banks in Metro Manila handing and disposing infectious, potentially infectious and hazardous wastes.

SECTION 3. Classification of Hospital Waste/Garbage

1. DRY WASTE - domestic type of hospital generated waste from packing materials of drugs, other related materials which may be classified as non-infectious including housekeeping, building and waste from ward sweepings, hospital compounds sweeping and other debris.

2. WET WASTE - domestic type of hospital generated waste from kitchen, canteen such as left-over foods, and waste from dietary preparation of menu from hospital kitche/dietary section.

3. "SHARPS" - such as needles, blades, scalpels, nails, saws, glass, slides, etc.

4 CLINICAL WASTE - hospital waste which may be generated from medical, nursing, dental, veterinary, laboratory pharmaceutical or similar practice, investigation, treatment care, teaching or research which by nature of its toxic, infectious or dangerous content may prove a hazard or may give offense unless previously rendered safe or inoffensive. Such waste includes human or animal tissue or excretions, contaminated drugs, medicinal products, swabs and dressings, instruments, disposable gloves, masks, gowns and similar materials and substances.

5. PATHOLOGICAL WASTE - type of hospital waste which include tissues, organs, body parts, human fetuses from surgical operation, biopsy and autopsy. Also included are animal carcasses, blood and body fluids usually coming from patients services.

6. CHEMICAL WASTE - hospital waste usually generated from diagnosis and experimental section, research section, cleaning and disinfecting procedures which is classified as hazardous and non-hazardous in the form of gas, solid and liquid chemicals.

7. RADIOACTIVE WASTE - hospital waste generated from nuclear medicine section, diagnostic and therapeutic procedures and the paraphernalia used. This is in the form of solid, liquid and gas contaminated with radionuclides, exemplified by radio-iodine technitium 99 and Indium in particular; excreta of patients who undergo radioisotopic therapeutic application; the needles and syringes, test tubes and tap waste washing of such paraphernalia.

SECTION 4. Stardard Hospital Waste/Garbage Collection System

To ensure uniformity and safety, the hospital should provide four (4) kinds of trash bags which shall be identified individually:

1. BLACK TRASH BAG - for collection of non-infectious dry waste
2. GREEN TRASH BAG - for collection of non-infectious wet wasted
3. YELLOW TRASH BAG - for collection of dry and wet:
   - infectious waste and other potentially infectious wastes
   - pathological waste
   - chemical waste
   - sharps contained in punctured-proof container covered with thick solution of lime
4. ORANGE TRASH BAG with Trefoil Sign - for collection of radioactive waste which will be stored in the hospital until rendered as inactive and/or disposed of in accordance with the prescribed rules and regulations of the Philippine Nuclear Research Institute (PNRI).

The hospitals are further required to match the color of the plastic bag to the color of the storage receptacle to facilitate efficient collection system.

SECTION 5. Standard Storage Procedure

All collected hospital waste/garbage should be tightly closed, segregated according to colors and handled/stored as follows:

1. Yellow trash bags should be placed in an enclosed area which should be secured with lock and key to prevent encroachment of scavengers and stray animals.
2. Black and green trash bags may be disposed off through Metro Manila's city and municipal collection and disposal system.
3. Orange trash bag with install sign should be placed in an enclosed interim storage of the hospital which should be secured with lock and key to prevent encroachment of scavengers and stray animals until the radioactive waste became inactive or disposed of at Philippine Nuclear Research Institute.

A central storage or transfer station shall be provided by the hospital and must conform with the following site criteria:

1. It must be located as near as possible to the center of waste production on the collection area which it serves.
2. It must be accessible to municipality/city collection service
3. It must be located in a place where the transfer operation could be done with minimum public objection and in accordance with sanitation provision
4. Location must meet local requirements such as zoning ordinance.
5. When transfer station is not feasible within the hospital compound, an arrangement with municipal collection service must be provided in transferring/disposing hospital waste to disposal site.

SECTION 6. Hospital Waste/Garbage Disposal System

All hospitals shall be required to provide their own colored trash bags for waste collection. They shall also be required to

provide their own means of disposal by using one of the applicable disposal system described below, for public and environmental health:

1. HOSPITAL INCINERATOR SYSTEM - This is provided with smoke or exhaust airscrubber with high pressure diesel fuel fired at a burning capability of 1000° C temperature heat. This will handle hospital waste in yellow trash bags and may also include wastes in black and green bags.

2. HOSPITAL ENCLOSED BURNING PIT - With a smoke stock and located about 50 to 100 meters from the hospital facilities. This is ideal for hospital with open spaces and away from the nearby buildings. The wind direction is studies. The location of the pit must be at a place where the wind blows the smoke away from the hospital facilities. The ashes of left-over burnt materials are thrown in the public dumpsite. This will handle hospital waste in yellow trash bags.

3. GROUND PITS - This is a dug up ground hole about 2 meters deep and 1 meter wide located at a safe distance from the hospital facilities. This is used to dump contaminated wastes described under Hospital Waste 3, 4, and 4. This will be covered by lime and by 10 cm. soil periodically or daily depending on the volume as such wastes. When this pit is filled up to 10 cm. from the ground level, this will then be covered with soil to ground levela nd labeled as to the date, to be identified and to be kept close and non-usable for at least four months after which this pit can be reused again. The hospital availing of this method should at least have 3 to 4 such pits for rotational schedule. The lime powder are made to a thick solution before actual application.

4. SEWAGE DISPOSAL SYSTEM - for urine and fecal materials in cases of typhoid, infectious diarrhea, poliomyelitis and infectious hepatitis, the technique for handling is dependent upon available sewage disposal facilities. In hospitals where there is no treated sewerage system or properly functioning septic tank, feces should be broken up and emptied into a covered can containing a 5% solution of a phenol or creosol type of dis-infectant to one quart of water. The mixture should stand for one hour before being applied into hopper or toilet. If the hospital wastes enter a treated sewerage system or with properly functioning septic tank, bed pans may be emptied into hoppers or toilets preliminary treatment. Incinerator which is occasionally employed is an absolute safeguard.

However, in consideration of the economic implication of providing individually by each hospital their own disposal system, groups of hospitals may jointly establish a disposal system that can service adequately the need for disposal facilities. Networking of available facility is likewise encouraged!

SECTION 7. Funding Source

All hospitals or entities shall be required to earmark specific amount necessary for the implementation of this ordinance.

SECTION 8. Special Garbage fee for Infectious and Hazardous Wastes and its Payment

All hospitals shall continue to be charged with the usual garbage fees related to general waste depending on their bed capacities or volume of garbage produced, whichever case applies, based on existing taxation regulation pursuant to Section 63 of the Ordinance

No. 82-03 as amended by Ordinance No. 83-02 of the Revenue Code of Metropolitan Manila. However, the fees for infectious and hazardous wastes are as follows:

A minimum monthly fee of three hundred pesos (₱00.00) shall be charged from each hospital plus additional fee of Fifty pesos (₱0.00) per cubic meter of garbage generated in excess of 5 cubic meters.

An order of Payment shall be secured from the Health Operations Center of the Metropolitan Manila Authority before payment is made either at MMA main office at Makati or the city/ municipal Treasurer of the locality.

The quarterly payment shall be paid by the hospitals, clinics, and laboratories within the first 10 days of the month of April, July, October and January. Failure to pay herein fee within the prescribed period, the payer shall be subject to a surcharge of twenty five percent (25%) of the amount due for each month of delinquency or fraction thereof after the due date until the amount is fully paid.

Disposition of proceeds - All revenues collected shall accrue to the fund of the Metropolitan Manila Authority to be used for maintenance and operating expenses of hospital waste management, collection and disposal and other improvement thereof.

SECTION 9. Penalties

Violation of any provisions, rules and guidelines embodied in this ordinance shall be punished by a fine not less than ₱00.00 ₱100.00 fine not more than ₱,000.00 or imprisonment of not less than 5 days nor more than one year or both such fine and imprisonment at the discretion of the court.

If the violator is a corporation, firm or other corporate entities, the maximum penalty shall be imposed upon the President, Director, Manager or persons responsible for its operation.

SECTION 10. Collection of Fines and Penalties

The fines imposed for vilation of the Ordinance shall be paid to the City Municipal Treasurer concerned in the Metro Manila area, and shall accrue as special fund of the Metropolitan Manila Authority to be expanded in the implementation of this Ordinance.

SECTION 11. Implementing Agencies

The Health Operations Center of the Metropolitan Manila Authority with assistance of local government units concerned shall ensure that the provisions of this ordinance shall faithfully and strictly implemented and enforced throughout Metro Manila area.

SECTION 12. Transitory Provision

All concerned institutions shall be strictly required to provide their own particular or joint waste disposal system. Meanwhile, during the process of establishing the said system, if they have no other means of managing their infectious and hazardous waste the concerned institutions may op to enter into a contract with MMA, but not to exceed the period of 6 months, otherwise, the penalty clause of this ordinance shall be enforced.

SECTION 13. Separability Clause

If any provision of this Ordinance or the application thereof is to any person or circumstance declared unconstitutional or invalid for any reason, the same shall not affect the validity of the other provisions.

SECTION. 14. Effectivity

This ordinance shall take effect ten (10) days after its publication in any newspaper of general circulation in Metro Manila.

Done in the Municipality of Makati, this 16th day of August, 1991.

A TRUE COPY
9 sep 95

Fifth Congress
of the
REPUBLIC OF THE PHILIPPINES
Fourth Session

R.A. 4226

Begun and held in the City of Manila on Monday, the twenty fifth day of January, nineteen hundred and sixty five.

AN ACT REQUIRING THE LICENSURE OF ALL HOSPITALS IN THE PHILIPPINES AND AUTHORIZING THE BUREAU OF MEDICAL SERVICES TO SERVE AS THE LICENSING AGENCY

Be it enacted by the Senate and House of Representatives of the Philippines in Congress assembled:

Section 1 - This Act shall also be known as the **Hospital Licensure Act.**

Section 2 - Definitions -

(a) "**Hospital**" means a place devoted primarily to the maintenance and operation of facilities for the diagnosis, treatment and care of individuals suffering from illness, disease, injury or deformity, or in need of obstetrical or other medical and nursing care. The term "hospital" shall also be construed as any institution, building or place where there are installed beds or cribs or bassinets for twenty-four hour use or longer by patients in the treatment of diseases, diseased-condition, injuries, deformities or abnormal physical and mental states, maternity cases, and sanitorial or sanitarial care infirmities, nurseries, dispensaries, and such other means by which they may be designated.

(b.) "**Government Hospital**" is a hospital operated and maintained either partially or wholly by the national, provincial, municipal or city government or other political subdivision, or by any department, division, board or other agency thereof.

(c.) "**Private Hospital**" is one which is privately owned, established and operated with funds raised or contributed through donations. or by private capital or other means, by private individuals, association, corporation, religious organizations, firms, company or joint stock association.

(d.) "**Clinic**" means a place in which patients avail of medical consultations or treatments on an out-patient basis. However, any clinic or dispensary where there is at least six (6) beds or cribs or bassinets installed for twenty-four hour use by patients shall be construed to fall within the definition of a hospital as described in this Act.

(e) "**Licensee**" is a person, or persons granted a license to operate and maintain a hospital according to an approved minimum standard.

Section 3 - ***Construction Permit*** - No hospital, government or private shall be constructed unless plans have been approved and construction permit issued by the licensing agency as defined in this Act.

Section 4 - ***Registration and License*** - No hospital shall operate or be opened to the public unless it shall have been registered and a license for its operation obtained from the licensing agency provided in this Act.

Section 5 - ***Licensing Agency*** - For purposes of setting standards in hospital construction and operation, the Bureau of Medical Services, in addition to its present duties, shall act as the licensing agency. The Secretary of Health shall reorganize this Bureau to include a staff of hospital architects, hospitals administrator's, sanitary engineers and such personnel as may be necessary to carry out the purposes of this Act without necessarily increasing the present personnel strength of this Bureau.

Section 6 - ***Powers and Duties of the Licensing Agency*** - The Bureau of Medical Services, or the licensing agency shall have the following powers and duties:

(a.) To conduct an ocular survey of all existing hospitals in the Philippines, government and private, with a view to determine their fitness to operate considering their facilities and physical plant.

(b.) To describe standard plans for government hospital plants in consultation with the Division of Architecture, Bureau of Public Works.

(c.) To approved plans for hospital plants, government or private and to issue permits or authority to construct hospitals in accordance with the provision of this Act.

(d.) To keep a permanent register of approved hospitals or those issued licenses to operate indicating the name of the hospital, address or location, type of hospital, name of the director or administrator, ownership, number of authorized beds and bassinets and such other pertinent data as may be necessary.

(e.) To grant licenses for the operation and maintenance of hospitals or revoke the same in accordance with the provisions of this Act.

(f.) To make periodic inspection of all hospitals as to check compliance with rules and regulations legally promulgated or with the provisions of this Act and to make recommendations to directors or administrators of hospitals for the correction of defects found during such inspection.

(g.) To publish yearly, a list of all approved hospitals indicating the name, location, type, authorized beds, and name of the Director or Administrator.

(h.) To submit yearly report to the Secretary of Health, the Speaker of the House of Representatives, the President of the Senate and Chairman and Members of the Committee on Health of both Houses of Congress, such report to include a list of approved hospitals indicating the name of the hospital, location, bed capacity and the name of the director or administrator and make recommendations on hospital needs or requirements for hospital service in certain communities that do not enjoy such hospital services.

Section 7 - ***Filing of Application for Construction Permit*** - Application for a Permit to Construct a hospital shall be submitted to the Office of the Director, Bureau of Medical Services in a form prescribed by the latter and accompanied by a plan of the hospital plant proposed to be constructed. The application shall state the name of the hospital, ownership, number of beds proposed to be operated, location and type of the hospital to be constructed.

Section 8 - ***Minimum Standards of Construction*** - In order that a permit to construct a hospital can be issued, the hospital plan shall provide sufficient bed space for the hospital bed capacity proposed, a laboratory room, and operating room, including work rooms for sterilization, anesthesia preparation, etc. an x-ray or radiology room, pharmacy dispensary or out-patient department, delivery room, isolation rooms, autopsy room or morgue, sufficient quarters for residents, nurses, attendants and helpers and sufficient number of toilet facilities.

Wards shall be constructed such that segregation of the sexes is observed and as far as practicable as to the type of cases to be confined.

Section 9 - ***Application for Registration and Issuance of License*** - Application for registration of a hospital and for the issuance of a license for its operation and maintenance shall be filed with the Bureau of Medical Services on a form prescribed by it. Registration may be made and license issued upon compliance with the provisions of section eight hereof and the rules and regulations prescribed by the licensing agency pursuant to the provision of this Act.

Section 10 - ***Inspection*** - Permit to construct a hospital or a major portion thereof and license to operate and maintain the same shall be issued by the licensing agency only after a representative of the licensing agency has conducted an ocular inspection and verified that the applicant has satisfactorily complied with the requisites prescribed in this Act. The license to operate and maintain a hospital shall be renewed every year upon payment of the prescribed fees.

Section 11 - ***Revocation of License*** - The licensing agency may suspend or evoke a license already issued for any of the following grounds: a) repeated violation by the licensee of any provision of this Act or of any other existing law; b) repeared failure to make necessary correction or adjustments required by the licensing agency in the improvement of facilities and services.

Section 12 - ***Hearing*** - Any person, association, corporation, or any other private entity who has been refused a license to operate and maintain a hospital or those license for such has been suspended ot revoked shall be entitled to administrative hearing to be conducted by the Secretary of Health and his two Undersecretaries to determine justifiability of such denial, suspension, or revocation of the license. Provided, that the licensee may resort to the courts, as in other cases provided by law.

Section 13 - ***Separate License Required*** - Separate licenses shall be required for hospital or branches thereof maintained in separate premises, even though they are operated under the same management. Provided, however, that separate licenses shall not be required for separate buildings in the same compound. Provided, further, that premises for construction or alteration of building within the same compound shall also be secured from the licensing agency to determine compliance with standards and requirements herein authorized.

Section 14 - ***License not Transferable*** - License for the operation of hospitals shall not be transferable. The licensing agency shall be notified of any change in ownership, change in name of hospital, and transfer of location and in the latter case, an application for new license should be submitted.

Section 15 - ***Rules and Regulations*** - The Bureau of Medical Services acting as a licensing agency and subject to the approval of the Secetary of Health, shall promulgate rules and regulations to implement the provisions of this Act.

Section 16 - ***Classification of Hospitals*** - The licensing agency shall study and adopt a system of classifying hospitals in the Philippines as to 1) general or special; 2) hospital service capabilities; 3) size or bed capacity and 4) class of hospital whether training or not.

Section 17 - ***Fees*** - Each applicant for a permit to construct a hospital shall pay the amount of five pesos as permit fee. A registration fee of five pesos and an annual license fee of ten pesos shall likewise be collected each hospital and for such approved license; provided that a government hospital shall be exempt from the payment of such fees. The amount herein collected shall be officially receipted by the licensing agency and shall constitute as a revolving fund for the use of the licensing agency.

Section 18 - ***Penalties*** - Any person, partnership, association or corporation who establishes, operates, conductes, manages or maintains a hospital or clinic within the meaning of this Act without first obtaining a license as provided for in this Act or vilates any provision hereof shall be liable to a fine of not more than five hundred pesos for the first offense, and each day that the hospital shall operate after the first conviction shall be considered a subsequent offense.

Section 19 - ***Repeal*** - Any law or laws or parts therof inconsistent with the provisions of this Act are hereby repealed.

Section 20 - ***Effectivity*** - This Act shall take effect upon its approval.

APPROVED:

FERDINAND E. MARCOS
President of the Senate

Finally passed by the Senate
on April 21, 1965

REGINO E. EUSTAQUIO
Secretary of Senate

Approved: June 19, 1965

CORNELIO T. VILLAREAL
Speaker of the House of Representative

This Act, which originated In the House of Representatives, was finally passed by the same on May 21, 1964

INOCENCIO B. PAREJA
Secretary of the House of Representatives

DIOSDADO MACAPAGAL
President of the Philippines

Republic of the Philippines
Department of Health
OFFICE OF THE SECRETARY
M a n i l a

April 3, 1989

ADMINISTRATIVE ORDER
No. 88-A, s 1989

REVISED RULES AND REGULATIONS GOVERNING THE REGISTRATION, LICENSURE AND OPERATION OF HOSPITALS IN THE PHILIPPINES

Sec. 1. TITLE: These rules shall be known as the "Revised Rules and Regulations Governing the Registration, Licensure and Operation of Hospitals in the Philippines."

Sec. 2. AUTHORITY: These rules and regulations are issued to implement R.A. 4226 (Hospital Licensure Law) consistent with E.O. 119 (Reorganization Act of the Ministry of Health).

Sec. 3. PURPOSE: These rules and regulations are promulgated to protect and promote the health of the public by ensuring quality hospital service appropriate to its level of health care through licensure and regulation of hospitals.

Sec. 4. SCOPE: The regulations embodied herein shall apply to any 1.) hospital, government or private; 2.) any institution; 3.) building or place where there are installed beds or cribs or bassinets for twenty-four-hour use or longer by patients in the treatment of diseases, diseased conditions, injuries, deformities or abnormal physical and mental states, maternity cases; 4.) all institutions such as those for convalescence, sanitarial care infirmities, nurseries, dispensaries and such other names by which they maybe designated and any clinic or dispensary where there is at least six (6) beds or cribs or bassinets installed for twenty four-hour use by patients.

Sec. 5. REGULATORY AUTHORITY: The Department of Health through the Bureau of Licensing and Regulation to the Office for Standards and Regulation, shall exercise the licensing and regulatory functions under these rules and regulation.

Sec. 6. CLASSIFICATION OF HOSPITALS: Pursuant to Sec. 16 of R.A. 4226, hospitals shall be classified as follows:

6.1 *GOVERNMENT OR PRIVATE:*

Government Hospital - operated and maintained partially or wholly by the national, provincial, municipal or city government or other political subdivision, board or other agency thereof.

Private Hospital - privately owned, established and operated with funds raised or contributed through donations, or by private capital or other means by private individuals, association, corporation, religious organizations, firm company or joint stock association.

6.2 *GENERAL OR SPECIAL:*

General Hospital - provides services for all kinds of illnesses, diseases, injuries or deformities.

Special Hospital - provides services for one particular kind of illness/disease or health medical care need.

6.3 *PRIMARY, SECONDARY AND TERTIARY CATEGORY ACCORDING TO SERVICES CAPABILITIES OFFERED:*

Primary Hospital - equipped with the service capabilities needed to support licensed physicians rendering services in Medicine, Pediatrics, Obstetrics and Minor Surgery.

Secondary Hospital - equipped with the service capabilities needed to support licensed physicians rendering services in the field of Medicine, Pediatrics, Obstetrics and Gynecology, General Surgery and other Ancillary Services.

Tertiary Hospital - is fully departmentalized and equipped with the service capabilities needed to support certified Medical Specialists and other licensed physicians rendering services in the field of Medicine, Pediatrics, Obstetrics and Gynecology, Surgery, their subspecialties and ancillary services.

6.4 *TRAINING AND NON-TRAINING:*

Teaching and Training Hospital - departmentalized hospital with accredited Residency Training Program in a specified specialty or discipline.

Sec. 7. MINIMUM STANDARDS FOR EACH CATEGORY OF HOSPITALS: The following shall be the minimum standards for service capabilities for each category:

7.1 PRIMARY

7.1.1 Administrative Service

7.1.2 Clinical and Ancillary Service

7.1.2.1 General Medicine
7.1.2.2 General Pediatrics
7.1.2.3 Obstetrics
7.1.2.4 Minor Surgery
7.1.2.5 Laboratory

7.1.3 Nursing Service

7.2 SECONDARY

7.2.1 Administrative Service

7.2.2 Clinical Service

7.2.2.1 General Medicine
7.2.2.2 General Pediatrics
7.2.2.3 Obstetrics and Gynecology
7.2.2.4 General Surgery

7.2.3 Medical Ancillary Services

7.2.3.1 Anesthesia
7.2.3.2 Radiology
7.2.3.3 Laboratory
7.2.3.4 Emergency and Out-Patient Service
7.2.3.5 Pharmacy Service
7.2.3.6 Medical Records

7.2.4 Nursing Service

7.2.5 Dietetic Service

7.2.6 Engineering, Maintenance and Housekeeping Service

7.3 TERTIARY

7.3.1 Administrative Service

7.3.2 Clinical Service

7.3.2.1 Department of Medicine

7.3.2.1.1 General Medicine
7.3.2.1.2 Cardiology
7.3.2.1.3 Gastroenterology
7.3.2.1.4 Hematology

7.3.2.1.5 Neurology
7.3.2.1.6 Infectious Diseases

7.3.2.2 Department of Pediatrics

7.3.2.2.1 General Pediatrics
7.3.2.2.2 Neonatology
7.3.2.2.3 Preventive Pediatrics
7.3.2.2.4 Infectious Diseases

7.3.2.3 Department of Surgery

7.3.2.3.1 General Surgery
7.3.2.3.2 Orthopedic and Traumatic Surgery

7.3.2.4 Department of OB-Gyne

7.3.2.4.1 Obstetrics
7.3.2.4.2 Gynecology

7.3.2.5 EENT Service

7.3.3 Medical Ancillary Service

7.3.3.1 Anesthesia Service
7.3.3.2 Pathology Department
7.3.3.3 Radiology Department
7.3.3.4 Emergency and Out-Patient Service
7.3.3.5 Dental Service
7.3.3.6 Pharmacy Service
7.3.3.7 Medical Records

7.3.4 Nursing Service

7.3.5 Dietetic Service

7.3.6 Engineering, Maintenance and Housekeeping Service

Sec. 8. LICENSING:

8.1 License - a formal authorization issued by the Department of Health to a person, association, partnership or corporation to operate and maintain a hospital including its ancillary medical services, such as Pharmacy, Laboratory, Radiology and other health services.

8.2 Provisional License - license issued by the Department of Health to a person, association, partnership or corporation to operate and maintain a hospital including its medical ancillary services and

other health services for reasonable time to allow the hospital to comply fully with the standards and requirements.

8.3 No hospital either government or private may operate without a proper and valid license issued by the Bureau of Licensing and Regulation.

Sec. 9. LICENSING REQUIREMENTS (TECHNICAL STANDARDS):

9.1 All hospital shall be required to demonstrate compliance with the Technical Standards as a requirement to licensing:

9.1.1 Personnel - adequate staffing by qualified and trained personnel with physicians and professionals licensed in their respective fields and by trained non-professionals.

9.1.2 Equipment/Instruments - necessary equipment/ instruments to undertake the required services.

9.1.3 Physical Facilities - well ventilated, lighted, clean and safe hospital building sufficient to accomodate its activities.

9.2 The Bureau of Licensing and Regulation shall evaluate compliance with such technical standards in accordance with the minimum requirements for such category of hospital.

Sec. 10. THE GOVERNING BODY, ADMINISTRATION AND MEDICAL STAFF: There shall be a governing authority for each hospital organization who shall be responsible for the conduct of the hospital as an institution, and in the case of the Department of Health, it shall be the Secretary of Health or his duly authorized representative(s). There shall be a well qualified Administrator, Director or Chief of Hospital designated to carry out its policies. The practicing physicians in the hospital shall be organized in order to provide quality patient care. There shall be a Chief of Medical Service, or Medical Director, or an equivalent position to organize, coordinate and supervise the hospital medical staff.

Sec. 11. THE BASIC HOSPITAL SERVICES: The following are the basic services depending on the category of hospitals.

11.1 *Primary Category*

11.1.1 Administrative Service - This shall attend to the admission, disposition and discharge of patients including financial transaction and other administrative aspect of hospital operations such as the provision of drugs and medicines, food and preservation of medical and administrative records.

11.1.2 Clinical Services - The physicians shall render services in General Medicine, Pediatrics, Obstetrics and Minor Surgery. Routine laboratory service should be available.

11.1.3 Nursing Service - The service should be headed by a registered nurse and shall provide professional nursing care at all times.

11.2 *Secondary Category:*

11.2.1 Administrative Service - This shall provide the functions of personnel, financial, supply management and general administration of the institution and shall be headed by qualified administrator.

11.2.2 Clinical Service - The medical staff shall render services in General Medicine, Pediatrics, Obstetrics and Gynecology and General Surgery.

11.2.3 Medical Ancillary Service - These are support services which include anesthesia, Clinical Laboratory, Radiology, Out-Patient and Emergency Service, Pharmacy and Medical Records.

11.2.3.1 Anesthesia Service - There shall be provided an anesthesia service within the hospital headed by a duly qualified Anesthesiologist.

11.2.3.2 Clinical Laboratory - There shall be provided the services of a duly licensed laboratory including routine chemistry within the hospital.

11.2.3.3 Radiology Service - There shall be provided a duly licensed x-ray service within the hospital.

11.2.3.4 Out-Patient Service - An out-patient service maintained for consultations and medical care not requiring hospitalization.

11.2.3.5 Emergency Service - There shall be a plan to attend to emergency cases and for the reception and care of casualties.

11.2.3.6 Pharmacy Service - A pharmacy service within the hospital shall be headed by a qualified Pharmacist.

11.2.3.7 Medical Records Service - There shall be a medical records service headed and staffed by a qualified personnel. Records shall be kept where they can be readily referred to by authorized persons.

11.2.4 Nursing Service - There shall be an organized service headed by a qualified professional nurse which will ensure the presence of a registered nurse on duty who shall provide nursing care at all times.

11.2.5 Dietetic Service - Shall be headed by a qualified dietitian who shall coordinate with other services of the hospital.

11.2.6 Engineering, Maintenance and Housekeeping Service - There shall be an engineering service which shall provide maintenance of facilities and equipment of the buildings and grounds as well as maintain the cleanliness and sanitation of their physical plant and environment.

11.3 Tertiary Category:

11.3.1 Administrative Service - there shall be an adequate number of skilled, competent personnel both professional and non-professional headed by a qualified administrator to perform the functions of personnel, financial, procurement and other administrative services.

11.3.2 Clinical Service - The medical services to patient shall be performed by the medical staff appointed by the governing body of the institution. The medical staff is responsible to be patient and to the governing body for the quality of all medical care rendered to the patient and for the ethical and professional practices of its members. It shall be organized along functional lines. There must be written rules and regulations defining the duties, responsibilities and privileges of each member of the staff for its services.

11.3.3 Medical Ancillary Service - These are support services which include Anesthesia Department, Pathology Department, Radiology Department, Out-Patient Department (OPD), Emergency Service, Dental, Pharmacy, Medical Records and Medical Social Services

11.3.3.1 Anesthesia Department - There shall be an organized department of anesthesia headed by a competent Anesthesiologist. An adequate staff of competent assistant Anesthesiologist(s), qualified to administer anesthetics shall be available to carry on the work of the department.

11.3.3.2 Pathology Department - The services of a duly licensed laboratory shall be provided within the hospital. All tertiary hospitals shall be required to have written and updated policy for the adequate provision of safe blood components for their patients. Such hospitals shall required to have person or a group of persons (e.g. Blood Transfusion Committee) designated to perform the duty of promoting voluntary blood donation and monitoring proper utilization of whole blood and its components.

11.3.3.3 Radiology Department - Duly licensed radiological services shall be provided including radiography and film processing within the hospital.

11.3.3.4 Out-Patient Department (OPD) - There shall be an OPD maintained in the hospital which may be organized into different clinics, the number of which shall depend on the degree of departmentalization of the medical staff available, hospital facilities and the needs of the community.

11.3.3.5 Emergency Service - There shall be a plan to attend to emergency cases and for the reception and care of casualties. It shall be headed by a General Surgeon or Internist and shall be provided with facilities to assure prompt diagnosis and emergency treatment. A small recovery or observation room shall be provided.

11.3.3.6 Dental Service - Tertiary hospitals may or may not have dental service which is headed by a qualified dentist.

11.3.3.7 Pharmacy Service - There shall be a pharmacy service which is headed by a qualified pharmacist. The pharmacy service shall be within the hospital with adequate space for compounding, dispensing and storage of pharmaceuticals. All tertiary hospitals are required to have Therapeutic Committee and a hospital formulary in generics.

11.3.3.8 Medical Records Service - This shall be headed and staffed by a qualified personnel. Current and complete clinical records sufficient to validate the diagnosis and to establish the basis for treatment shall be kept for each patient. Statistical reports shall be submitted quarterly to the Bureau of Licensing and Regulation.

Every hospital shall comply with all laws, ordinances, rules and regulations which provide for the registration of births and deaths and the reporting of communicable and other diseases.

11.3.3.9 Medical Social Service - There shall be qualified Medical Social Worker to head a unit/service which shall serve as liason for the hospital and the community. Although it is not required for licensing purposes, it is advisable that one such unit/service be established and maintained to improve hospital patient care.

11.3.4 Nursing Service - There shall be an organized service headed by the qualified professional nurse which shall ensure the presence of a registered nurse on duty who shall provide professional nursing care at all times. Nursing units and nursing areas shall be provided with Nursing Procedures Manual for guidance of all nursing personnel. Written policies shall be established for all Nursing Service areas within the hospital. Provisions shall be made for the preparation of medications and treatments.

11.3.5 Dietetic Service - Shall be headed by a qualified dietitian and it shall coordinate with other services of the hospital. Working arrangements with the nursing, medical and other services of the hospital shall be established to ensure that the needs of patients are met as determined by the licensing agency. Written dietetic policies shall be established as a guide for carrying our dietetic procedures.

11.3.6 Engineering, Maintenance and Housekeeping Service - There shall be an engineering services which shall provide maintenance of facilities and equipment of the building and grounds as well as physical plant and environment. This service in hospital below 100 bed capacity shall be headed by a competent maintenance man and for those 100 beds and above, by a hospital engineer.

Sec. 12. PHYSICAL FACILITIES: Upon application for permit to construct, the plans and design shall show compliance with the following requirements for physical facilities needed in accordance with the category and service capabilities of the hospital being applied for.

12.1 Physical Plant - The construction of a new hospital and alterations or additions to existing facilities shall be made in accordance with plans and specifications prepared by a duly licensed Architect or Civil Engineer and approved by the Bureau of Licensing and Regulation. Any individual or group planning such construction shall submit final plans and specifications to the Bureau of Licensing and Regulation for review and approval with respect to compliance with the minimum standards prescribed thereof. Final plans submitted shall be in sufficient detail to show the type and location of major items of equipment, the intended use of each room, type and source of utilities and the proposed system for garbage and refuse disposal. Any changes/alterations in the original plans after construction shall be approved by the Bureau of Licensing and Regulation.

12.1.1 The hospital building shall be adequately ventilated. Patients room shall be of sufficient size to allow no less than 80 square feet of floor space for bed, and designed to allow for passage and work area between beds and at the foot of the bed. Plans and specifications for private rooms shall provide no less than 100 square feet of floor area.

12.2 Safety and Sanitation - Hospital buildings shall be of such construction so that no hazards to the life and safety of patients and personnel exist. Buildings shall be capable of withstanding weight and elements to which they must be subjected.

12.2.1 Facilities for the maintenance of sanitary standards, including approved water supply and sewerage system, shall be provided throughout the hospital buildings and premises for insuring cleanliness.

12.3 Maintenance and Planning - All hospital buildings and equipment shall be kept in a state of good repair. Proper maintenance shall be provided to correct or prevent leaking roofs or walls, loose plaster or uneven flooring, faulty equipment or other undesirable conditions which may be placed in the category of poor maintenance.

12.4 Surgery and Obstetrics

12.4.1 Surgery - If surgical service is provided, the surgical suite shall be equipped with air conditioning units and shall be also located and organized to prevent through traffic. Equipment, instruments and supplies shall be available to meet the needs for the surgical procedures performed such as anesthetic drugs and supplies to combat shock and hemorrhage, special illumination of the operating field, hand scrubbing and sterilizing facilities.

Hospitals providing surgical service shall have facilities available for examination of tissue specimens by a pathologist either on the premises or by arrangement through affiliation, with a duly licensed pathological laboratory.

12.4.2 Obstetrics - The obstetrical and newborn services, shall be in a segregated area of the hospital. The labor room shall be adjacent to the delivery room.

There shall be available in the Obstetrical Suite, instruments and supplies for uncomplicated and operative obstetrics and for administration of anesthesia and sterilizing facilities. Facilities for the preparation, examination and transport of patients shall also be provided.

Provisions shall be made for the isolation of all obstetrical patients and infants with infections.

12.4.3 The hospital nursery shall provide an isolation nursery for the use and care of pathological newborn delivered in the hospital. It shall have space enough for supplies and equipment for the safe and care of the newborn.

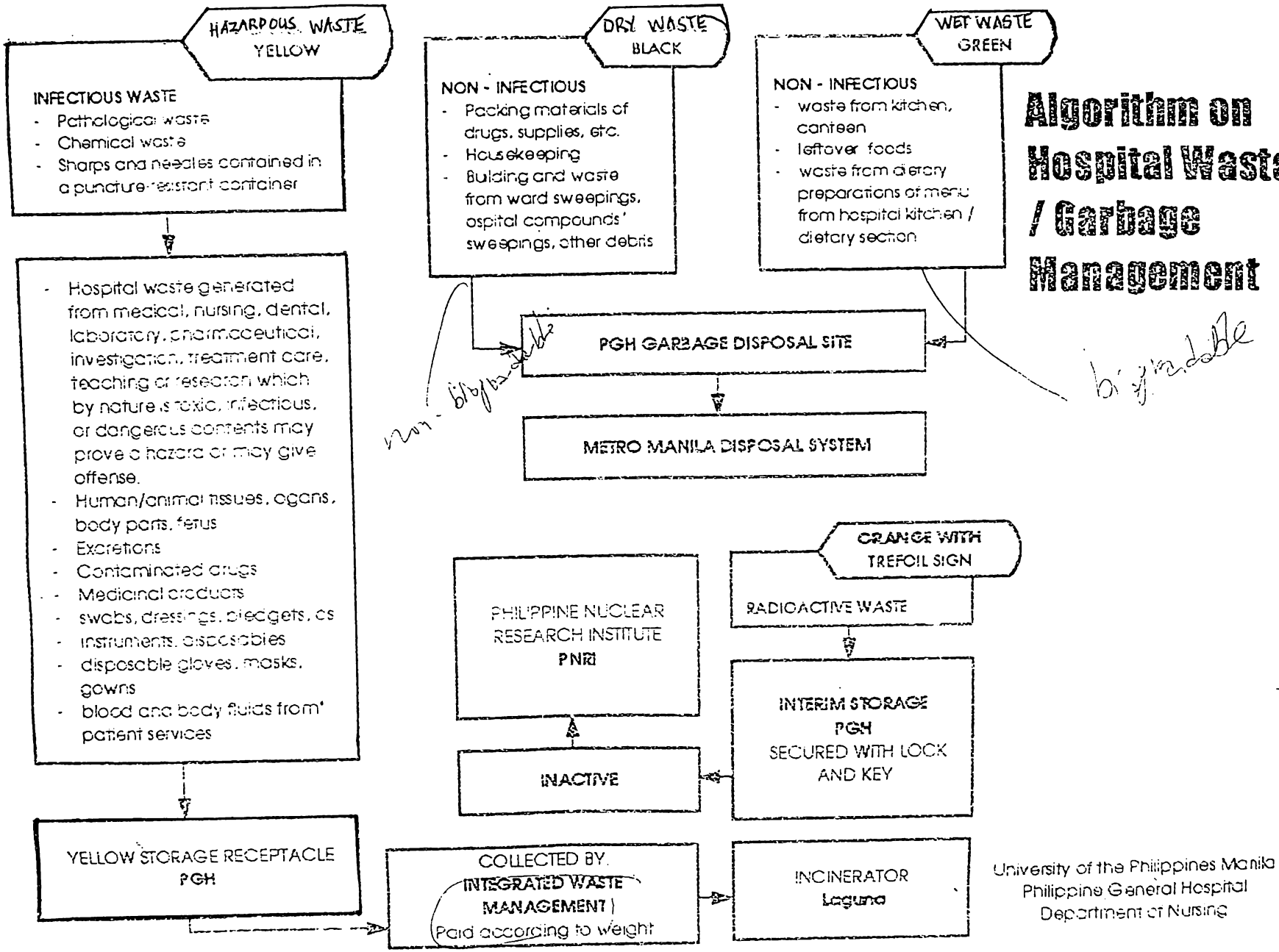
Reliable means for positive identification shall be made for every infant before leaving the delivery room. Such identification shall remain on the infant until it leaves the hospital.

12.5 Medical Records - There shall be provided facilities for medical records which shall include a medical records room with satisfactory storage area in all hospitals.

12.6 Nursing - Nursing stations shall be provided in all in-patients areas of the hospital with a ratio of at least one (1) nurse station for every thirty-five (35) beds.

APPENDIX C
ALGORITHMS OF PGH

Algorithm on Hospital Waste / Garbage Management



University of the Philippines Manila
Philippine General Hospital
Department of Nursing

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Philippine General Hospital
Department of Nursing

Algorithm for Decontamination and Disinfection/Sterilization Procedure

USED / SOILED / DIRTY ARTICLES & SUPPLIES

DECONTAMINATE
(Pre-soak)

SOAK
15 to 30 minutes into either of the following:

For items that will not corrode:
Na Hypochlorite
Presept

For those that will corrode:
Glutaraldehyde
(Cidex)

PROCESS
Mechanical Cleaning

1. Soap / Brush / Scrub / Milk / Flush
2. Rinse : Brush / Scrub / Milk / Flush
3. Dry

DISINFECT
1 to 2 HOURS
STERILIZE
8 to10 HOURS

SOAK
Na Hypochlorite, or
Presept, or
Glutaraldehyde
(Cidex)

PRACTICE ASEPTIC TECHNIQUE

RINSE
with sterile water

DRY

PACK
Use sterile pack.

Place tag:

Processed by:
Checked by:
Packed by:
Date:

STORE
Sterile / Closed Containers

University of the Philippines Manila
Philippine General Hospital
Department of Nursing

ALGORITHM FOR TERMINAL CLEANING PROCEDURE

OCCUPIED
Bed and Room, or
Stretcher, Incubator,
Bassinet, Wheelchair

↓

DISCHARGED, or
DEATH / TRANSFERRED

↓

TERMINAL CLEANING

↓

NON INFECTIOUS CASE

↓

SCRUB
with soap and water

↓

Bed : head & footboard
/ part horizontal surface
mattress cover pillow cover
bedside table overbed table
chairs, long johns cabinets
eating utensils
Wall and Floor
Comfort Room
toilet bowl flushing pitcher
sink

↓

REFER TO ALGORITHM FOR
DECONTAMINATION AND DISINFECTION /
STERILIZATION PROCEDURE

bedpan urinal basins cans
sputum cups kidney basin
other small items used by patients

INFECTIOUS CASE AND WET / SOAKED WITH BODY FLUIDS & BLOOD

↓

DECONTAMINATE
Apply either of the following for 30 mins:

1. Na Hypochlorite
2. Presept
3. Lysol 3%

↓

SCRUB
with soap and water

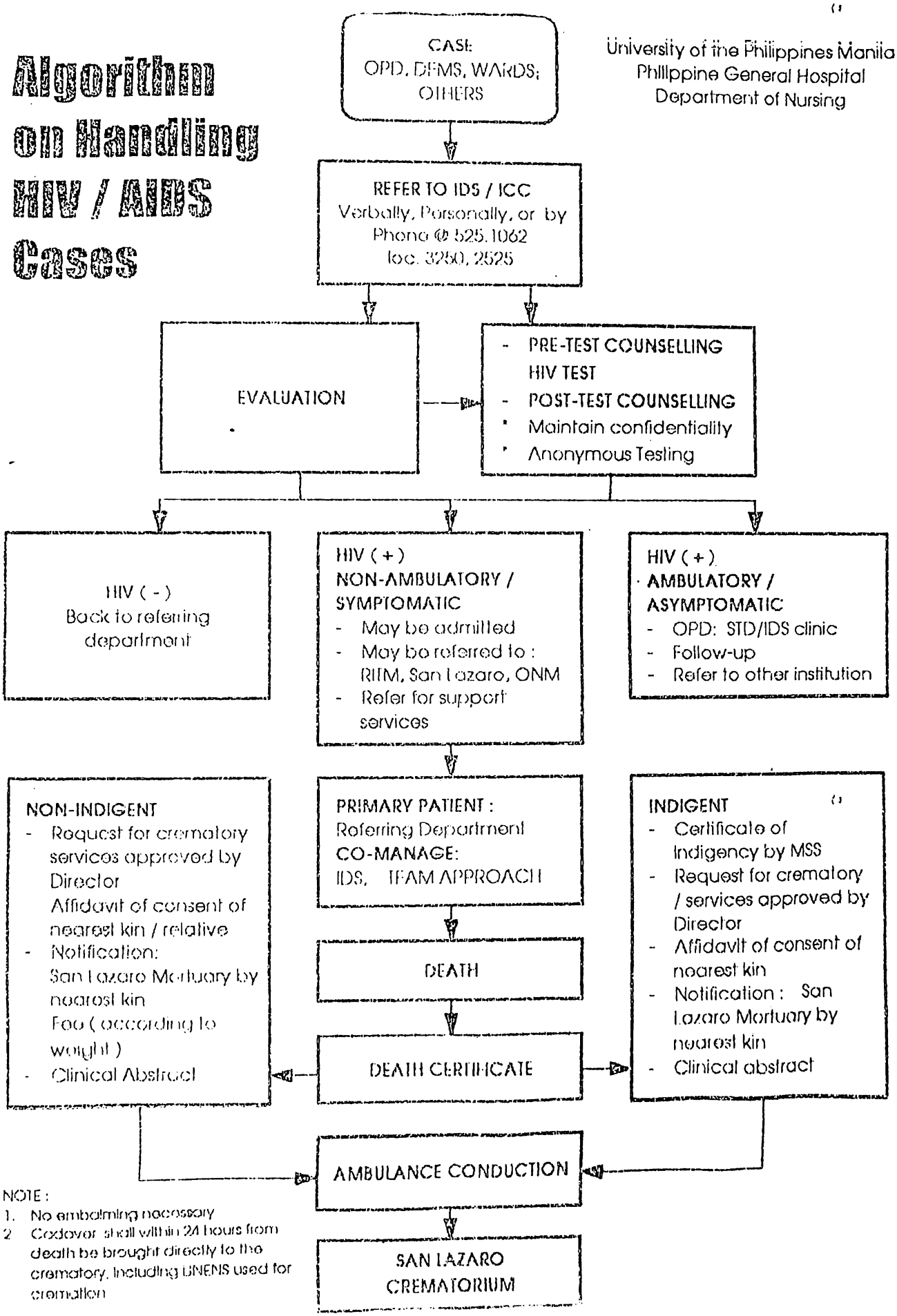
↓

DISINFECT
Apply either of the following :

1. Na Hypochlorite
2. Presept
3. Lysol

Algorithm on Handling HIV / AIDS Cases

University of the Philippines Manila
Philippine General Hospital
Department of Nursing



NOTE :

1. No embalming necessary
2. Cadaver shall within 24 hours from death be brought directly to the crematory, including LINENS used for cremation

PHILIPPINE GENERAL HOSPITAL
University of the Philippines
Taft Avenue, Manila

June 1, 1995

MEMORANDUM NO. 95-56

TO : All Concerned

FROM : ANTONIO M. MONTALBAN, M.D., M.H.A., M.P.H.
Director

SUBJECT : Hospital Policy on Handling of HIV/AIDS Suspects or Confirmed Cases

These guidelines are intended to help the hospital personnel properly care for HIV/AIDS suspects/cases encountered in the hospital or outpatient services.

1. Handling of suspects and confirmed HIV/AIDS cases

Suspects or confirmed cases should be referred immediately to fellows or rotating residents of the Infectious Disease Section or the Infection Control Nurse. Inquire at PGH + 58-24-22 or PGH local 2525 or 3250. The fellows and infection control nurse will evaluate, provide pre- and post-test counselling and request for other needed tests. After preliminary evaluation,

1.1 Ambulatory and asymptomatic patients may be sent home but advised to return to the Infection Disease Section (IDS) / Infection Control Committee (ICC) after one week. If confirmed positive, patients will be referred to HIV/AIDS referral centers (Research Institute for Tropical Medicine (RITM or San Lazaro Hospital) for further treatment. Confirmed HIV negative patients will be advised to return to the referring departments or section for management of their medical/surgical problem.

1.2 Non-ambulatory HIV positive cases requiring hospitalization for acute medical or surgical problem maybe temporarily placed in one corner of the ward. The diagnosis of the patient should be kept confidential among the personnel, medical interns and clerks.

3. Reducing Risk of Transmission to Hospital Personnel

3.1 Practice of Universal Precautions* should be implemented throughout the hospital bearing in mind limitations in supplies and equipment. Innovative barrier techniques and cost cutting approaches such as recycling after proper decontamination, use of locally fabricated plastic gloves and aprons and face shields is encouraged.

3.2 Adequate supply of clean non-sterile plastic or latex gloves, aprons, masks (non-porous), surgical instruments, sharps, decontaminating solutions and disposable syringes and needles should be available in areas like DEMS, OBAS and other high risk areas where most cases of HIV/AIDS are seen. Due to budgetary limitation and for their own protection, medical interns and other students, residents and fellows are urged to provide their own re-usable face shields, clean/non-sterile gloves and plastic aprons.

3.3 If despite strict adherence to Universal Precautions, accidental exposure to HIV positive case occurs, the incident should be immediately reported to the Infection Control Office through Mrs. Dominga Gomez, the Infection Control Nurse, local 3250 or IIS Fellow at Telephone NO. 5812422 or local 2525 so that the victim can be advised accordingly. All baseline studies must be performed free of charge. Referral to other centers will be facilitated by the IDS/ICC Office.

4. Recording and Reporting

All confirmed cases should be entered in a registry book following the coding system of DOH. All these cases should be reported to the DOH by the IDS/ICC office according to the established system of reporting.

5. Education and Training

Hospital personnel are obliged to attend a series of education and training sessions on HIV/AIDS prepared by the UPM HIV/AIDS Study Group and PGH AIDS Task Force. Announcement of schedules will be posted in prominent areas of the hospital and sent to the head of office.

1.3 The team approach should be utilized in the management of these cases. This means involvement of members of the hospital HIV/AIDS Task Force and the whole staff in the planning and management until the time the patient is discharged. As soon as their medical or surgical problem is resolved, the IDS/ICC and MSS will facilitate transfer to referral centers for treatment of HIV/AIDS or provision of the other support system to the patient.

1.4 For admitted cases found to be HIV/AIDS, the same policy as in 1.2 and 1.3 should be applied.

1.5 HIV-AIDS cases who die should be brought directly to the crematory within 24 hours from death including the linens to be used for cremation. The following documents should be accomplished before sending the body to the mortuary:

1.5.1 Notification of death to the mortuary with affidavit of consent of nearest kin and certificate of indigency to be prepared by the Medical Social Service.

1.5.2 Death Certificate

1.5.3 Request for crematory services duly approved by the director or his authorized representative.

1.5.4 Report of the attending physician and nursing staff.

Counselling and Confidentiality of Information

2.1 A core group trained to provide pre- and post-test counselling can be reached through the IDS/ICC office. However, everybody should learn how to provide his service to patients. Interview and counselling should be conducted in a room with privacy. Pre- and post-test counselling is mandatory.

2.2 Confidentiality of information and patients identity should be maintained at all times. The HIV/AIDS Task Force is developing a system of coding consistent with that of the Department of Health. Request for HIV testing should not be ordered in patients' charts but should be arranged with the IDS/ICC office.

A continuing medical education program on the application of acquired knowledge will start as soon as the HIV/AIDS unit becomes operational.

For your information and guidance.

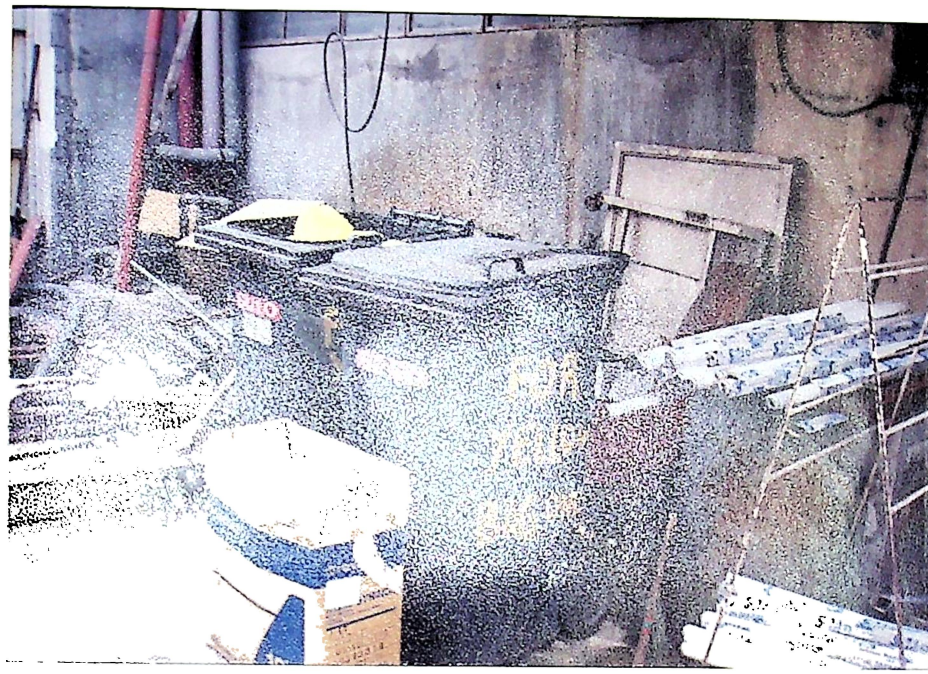
APPENDIX D
PICTURES FROM MDH

Closed site storage of black and green bags in Manila Doctors Hospital

Right after the collection in the morning, the storage area is cleansed.

The inside view of the closed storage for black and green bags.

The door opens in the side of U.N. Ave. where the garbage trucks park.



Big receptacles for yellow bags at MDH.

These receptacles are located at the back of the hospital.

Garbage collection at MDH.

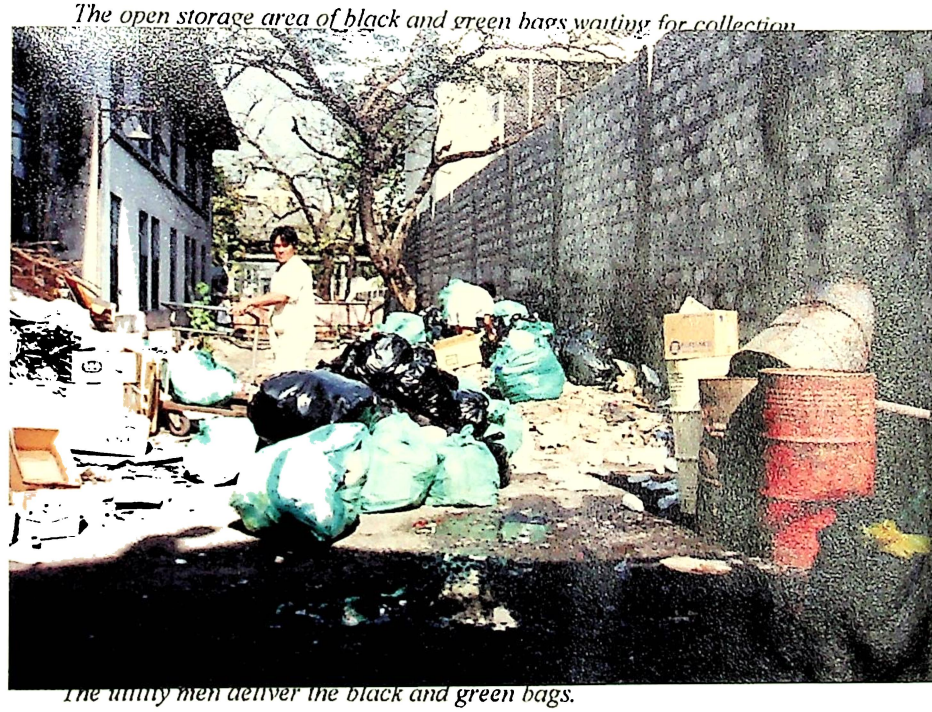
Green and black bags are compressed without discrimination inside the truck.

The waste collectors themselves get the wastes that can possibly be sold

The wastes are placed in the front of the truck. They are especially earmarked and they are not included in the wastes compressed inside the truck.

APPENDIX E
PICTURES FROM PGH

The open storage area of black and green bags waiting for collection

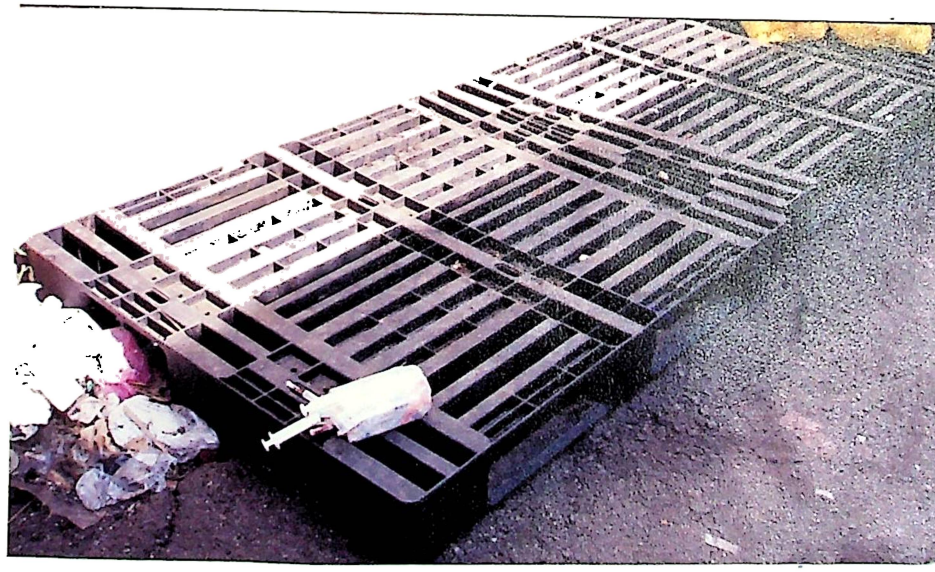


The dustmen deliver the black and green bags.

A utility man scavenges the garbage which came from the dietary section.

He is looking for leftovers to bring to his dog.

The open site in PGH for it yellow bags. Black bags are sometimes used as substitute for yellow bags.



A spilt injection container in the open site storage for yellow bags.

Yellow bags waiting for collection.

The bottles will be sold by the utility men.

Open container for sharps.